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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Mark Clardy (clardy) Examiner #: 69462 Date: 6/6/03
Art Unit: 1616 Phone Number 308-4550 Serial Number: 09/977,146
Mail Box and Bldg/Room Location: CM1-2D11 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

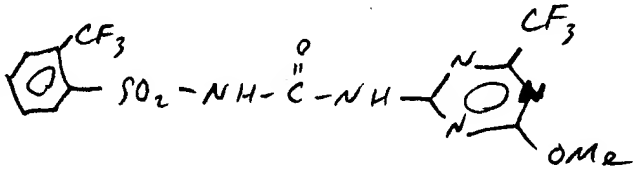
Title of Invention: _____

Inventors (please provide full names): attached

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Herbicidal compositions comprising sulfonylurea herbicides + a second herbicide.

Elected species: ①  + ② glyphosate

Claims & Bib Data attached.

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STAFF USE ONLY	Type of Search		Vendors and cost where applicable
Searcher: _____	NA Sequence (#) _____		STN 1374.91
Searcher Phone #: _____	AA Sequence (#) _____		Dialog _____
Searcher Location: _____	Structure (#) 3		Questel/Orbit _____
Date Searcher Picked Up: 6/6	Bibliographic _____		Dr.Link _____
Date Completed: 6/9	Litigation _____		Lexis/Nexis _____
Searcher Prep & Review Time: 60	Fulltext _____		Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____		WWW/Internet _____
Online Time: 87	Other _____		Other (specify) _____

PTO-1590 (8-01)

tritosulfuron

STATUS: ISO 1750 (published)

IUPAC: 1-[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]-3-[2-(trifluoromethyl)benzenesulfonyl]urea

CAS: *N*-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)benzenesulfonamide

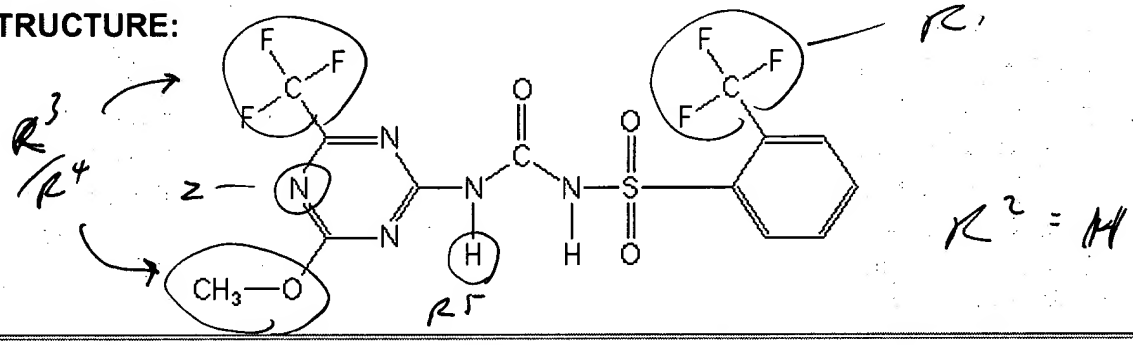
REG. NO.: 142469-14-5

FORMULA: $C_{13}H_9F_6N_5O_4S$

ACTIVITY: herbicides (triazinylsulfonylurea herbicides)

NOTES:

STRUCTURE:



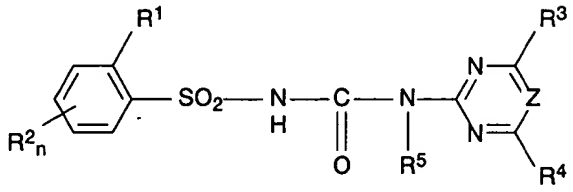
| Home | Index of common names | Pesticide classification | Site Map |

APPENDIX I:

THE AMENDED CLAIMS:

14. (*new*) A herbicidal composition comprising

a) at least one sulfonylurea of the formula I



(I)

wherein

R^1 is C_1-C_6-alkyl which carries one to five of the following groups: methoxy, ethoxy, SO_2CH_3, cyano, chlorine, fluorine, SCH_3, $S(O)CH_3$;
halogen; a group ER^6 where E is O, S or NR^7; $COOR^8$; NO_2; $S(O)_oR^9$; $SO_2NR^{10}R^{11}$; $CONR^{10}R^{11}$;

R^2 is hydrogen, C_1-C_4-alkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, halogen, C_1-C_4-alkoxy, C_1-C_4-haloalkoxy, C_1-C_4-haloalkyl, C_1-C_2-alkylsulfonyl, nitro, cyano or C_1-C_4-alkylthio;

R^3 is F, CF_3, CF_2Cl, CF_2H, OCF_3, OCF_2Cl, or,
if R^1 is CO_2CH_3 and R^2 is simultaneously fluorine, R^3 is Cl, or,
if R^1 is CH_2CF_3 or CF_2CF_3, R^3 is methyl, or,
if R^4 is OCF_3 or OCF_2Cl, R^3 is OCF_2H or OCF_2Br;

R^4 is C_1-C_2-alkoxy, C_1-C_2-alkyl, C_1-C_2-alkylthio, C_1-C_2-alkylamino, di-C_1-C_2-alkylamino, halogen, C_1-C_2-haloalkyl, C_1-C_2-haloalkoxy;

R^5 is hydrogen, C_1-C_2-alkoxy, C_1-C_4-alkyl;

R^6 is C_1-C_4-alkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl or C_3-C_6-cycloalkyl, where these groups may carry 1 to 5 halogen atoms, with the exception of allyl, difluoromethoxy, chlorodifluoromethoxy and 2-chloroethoxy when E is O or S; or
in the event that E is O or NR^7, R^6 is furthermore methylsulfonyl, ethylsulfonyl, trifluoromethylsulfonyl, allylsulfonyl, propargylsulfonyl or dimethylsulfamoyl;

R^7 is hydrogen, methyl or ethyl;

R^8 is C_1-C_6-alkyl, which may carry up to three of the following radicals: halogen, C_1-C_4-alkoxy, C_1-C_4-alkylthio, C_1-C_4-haloalkoxy, C_1-C_4-alkoxy-C_1-C_4-alkoxy, C_3-C_7-cycloalkyl and/or phenyl;
C_5-C_7-cycloalkyl which may carry up to three C_1-C_4-alkyl groups;
C_3-C_6-alkenyl or C_3-C_6-alkynyl;

R^9 is C_1-C_6-alkyl, which may carry up to three of the following radicals: halogen, C_1-C_4-alkoxy, C_1-C_4-alkylthio, C_1-C_4-haloalkoxy, C_1-C_4-alkoxy-C_1-C_4-alkoxy, C_3-C_7-cycloalkyl and/or phenyl;
C_5-C_7-cycloalkyl which may carry up to three C_1-C_4-alkyl groups;
C_3-C_6-alkenyl or C_3-C_6-alkynyl;

R^{10} is hydrogen, C_1-C_2-alkoxy, C_1-C_6-alkyl, or
together with R^{11} is a C_4-C_6-alkylene chain in which one methylene group may be replaced by an oxygen atom or a C_1-C_4-alkylimino group;

R^{11} is C_1-C_4-alkyl which may carry one to four halogen or C_1-C_4-alkoxy radicals; C_3-C_6-cycloalkyl;

n is 0 - 3;

o is 1 or 2;

Z is N or CH,

or an enviromentally compatible salt of I, and

b) at least one herbicidal compound selected from groups b_1, b_3 to b_5, b_{10} to b_{20}, b_{22} to b_{25}, b_{28}, b_{29}, b_{31} to b_{35} and b_{38} to b_{41}:

b_1) 1,3,4-thiadiazoles: buthidazole and cyprazole;

b_3) aminophosphoric acids: bilanafos, bialaphos, buminafos, glufosinate-ammonium, glyphosate and sulfosate;

b_4) aminotriazoles: amitrol;

b_5) anilides: anilofos and mefenacet;

b_{10}) carbamates: asulam, barban, butylate, carbetamid, chlorbufam, chlorpropham, cycloate, desmedipham, di-allate, EPTC, esprocarb, molinate, orbencarb, pebulate, phenisopham, phenmedipham, propham, prosulfocarb, pyributicarb, sulf-allate (CDEC), terbucarb, thiobencarb (benthiocarb), tiocarbazil, tri-allate and vernolate;

b_{11}) quinolinecarboxylic acids: quinclorac and quinmerac;

b_{12}) chloracetanilides: acetochlor, alachlor, butachlor, butenachlor, diethatyl-ethyl, dimethachlor, metazachlor, metolachlor, pretilachlor, propachlor, prynachlor, terbuchlor, thenylchlor and xylachlor;

b_{13}) cyclohexenones: alloxydim, caloxydim, clethodim, cloproxydim, cycloxydim, sethoxydim, tralkoxydim and 2-{1-[2-(4-chlorophenoxy)propyloxyimino]butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one;

b_{14}) dichloropropionic acids: dalapon;

b_{15}) dihydrobenzofurans: ethofumesate;

b_{16}) dihydrofuran-3-ones: flurtamone;

b_{17}) dinitroanilines: benefin, butralin, dinitramin, ethalfluralin, fluchloralin, isopropalin, nitralin, oryzalin, pendimethalin, prodiamine, profluralin and trifluralin;

b_{18}) dinitrophenols: bromofenoxim, dinoseb, dinoseb-acetat, dinoterb and DNOC;

b_{19}) diphenyl ethers: acifluorfen-sodium, aclonifen, chlornitrofen (CNP), difenoxuron, ethoxyfen, fluorodifen, fluoroglycofen-ethyl, fomesafen, furyloxyfen, lactofen, nitrofen, nitrofluorfen and oxyfluorfen;

b_{20}) dipyridylenes: cyperquat, difenzoquat methylsulfate, diquat and paraquat dichloride;

b_{22}) imidazoles: isocarbamid;

b_{23}) imidazolinones: imazamethapyr, imazapyr, imazaquin, imazethabenzmethyl (imazame) and imazethapyr;

b_{24}) oxadiazoles: methazole, oxadiargyl and oxadiazon;

b_{25}) oxiranes: tridiphane;

b_{28}) phenylacetic acids: chlorfenac (fenac);

b_{29}) phenylpropionic acid: chlorophenprop-methyl;

b_{31}) pyrazoles: nipyraclofen;

b_{32}) pyridazines: chloridazon, maleic hydrazide, norflurazon and pyridate;

b_{33}) pyridinecarboxylic acids: clopyralid, dithiopyr, picloram and thiazopyr;

b_{34}) pyrimidyl ethers: pyrithiobac acid, pyrithiobac sodium, KIH-2023 and KIH-6127;

b_{35}) sulfonamides: flumetsulam and metosulam;

b_{38}) triazinones: ethiozin, metamitron and metribuzin;

b_{39}) triazolecarboxamides: triazofenamid;

b_{40}) uracils: bromacil, lenacil and terbacil;

b_{41}) others: benazolin, benfuresate, bensulfide, benzofluor, butamifos, cafenstrole, chlorthal-dimethyl (DCPA), cinmethylin, dichlobenil, endothall, fluorbentranil, mefluidide, perfluidone and piperophos,

or an environmentally compatible salt of the herbicidal compound,

in a synergisitcally active amount.

2. (*amended*) The herbicidal composition defined in claim 14, comprising the sulfonylurea of formula I wherein

R^1 is CO_2CH_3, $CO_2C_2H_5$, $CO_2iC_3H_7$, CF_3, CF_2H, CH_2CF_3, CF_2CF_3, OSO_2CH_3, $OSO_2N(CH_3)_2$, Cl, NO_2, $SO_2N(CH_3)_2$, SO_2CH_3, $SO_2C_2H_5$ and $N(CH_3)SO_2CH_3$,

R^2 is hydrogen, halogen or methyl,

R^3 is CF_2H, OCF_3, OCF_2Cl, CF_3, or,
if R^1 is CO_2CH_3 and R^2 is simultaneously fluorine, R^3 is Cl, or,
if R^1 is CH_2CF_3 or CF_2CF_3, R^3 is methyl,

R^4 is OCH_3, and

R^5 is hydrogen.

3. (*amended*) The herbicidal composition defined in claim 14, comprising the sulfonylurea of formula I wherein

R^1 is halogen, a group ER^6, CO_2R^8, SO_2CH_3 or $SO_2C_2H_5$,

R^2 is hydrogen,

R^3 is F,

R^4 is OCF_3, OCF_2Cl or OCH_3, and

R^5 is hydrogen.

4. (*amended*) The herbicidal composition defined in claim 14, comprising the sulfonylurea of formula I wherein

R^1 is CF_3,

R^2 is hydrogen,

R^3 is CF_3,

R^4 is OCH_3,

R^5 is hydrogen, and

Z is N.

5. (*amended*) The herbicidal composition defined in claim 14, wherein the herbicidal compound (b) is selected from the group consisting of

glufosinate-ammonium, glyphosate, sulfosate, mefenacet, phenmedipham, thiobencarb, quinclorac, quinmerac, acetochlor, alachlor, butachlor, metazachlor, metolachlor, pretilachlor, butroxydim, clethodim, cloproxydim, sethoxydim, tralkoxydim, caloxydim, 2-{1-[2-(4-chlorophenoxy)propyloxyimino]- butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one, pendimethalin, acifluorfen-sodium, bifenox, fluoroglycofen-ethyl, fomesafen, lactofen, imazaquin, imazethabenzmethyl, imazethapyr, pyridate, clopyralid, bispyribac-sodium, KIH-8555, KUH-920, flumetsulam, metosulam, benazolin, benfuresate, cafenstrole and cinmethylin.

6. (*amended*) The herbicidal composition defined in claim 14, wherein the herbicidal compound (b) is selected from the group consisting of

B1 phenmedipham, thiobencarb, quinclorac, caloxydim, sethoxydim, 2-{1-[2-(4-chlorophenoxy)propyloxyimino]butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one, acifluorfen-sodium and fluoroglycofen-ethyl.

7. (*amended*) The herbicidal composition defined in claim 14, comprising the sulfonylurea (a) and the one or more herbicidal compounds (b) in a weight ratio of 1:0.1 to 1:40.

8. (*amended*) The herbicidal composition defined in claim 14, comprising the sulfonylurea (a) and the one or more herbicidal compounds (b) in a weight ratio of 1:0.1 to 1:20.

9. (*amended*) A herbicidal composition comprising

a) a herbicidally active amount on a sulfonylurea of formula I as defined in claim 14,

b) a synergistically active amount of at least one of the herbicidal compounds (b) defined in claim 14,

at least one liquid or solid carrier and optionally at least one adjuvant.

10. (*amended*) The herbicidal composition defined in claim 9, wherein the sulfonylurea (a) and one or more of the herbicidaly compounds (b) are present in a weight ratio of 1:0.1 to 1:40.

11. (*amended*) The herbicidal composition defined in claim 9, wherein the sulfonylurea (a) and one or more of the herbicidaly compounds (b) are present in a weight ratio of 1:0.1 to 1:40.

12. (*amended*) A method of controlling undesirable vegetation, which comprises applying the sulfonylurea (a) defined in claim 14 and one or more of the herbicidal compounds (b) defined in claim 14 before, during or after the emergence of undesirable plants, either simultaneously or in succession.

13. (*amended*) A method of controlling undesirable vegetation, which comprises treating the leaves of crop plants and of undesired plants with the sulfonylurea (a) defined in claim 14 and one or more of the herbicidal compounds (b) defined in claim 14, either simultaneously or in succession.

15. (*new*) The composition defined in claim 14, wherein component b) is at least one compound selected from the group consisting of

b_3) aminophosphoric acids: bilanafos, bialaphos, buminafos, glufosinate-ammonium, glyphosate, sulfosate;

b_{13}) cyclohexenones: alloxydim, caloxydim, clethodim, cloproxydim, cycloxydim, sethoxydim, tralkoxydim, 2-{1-[2-(4-chloro- phenoxy)propyloxyimino]butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one;

b_{17}) dinitroanilines: benefin, butralin, dinitramin, ethalfluralin, fluchloralin, isopropalin, nitralin, oryzalin, pendimethalin, prodiamine, profluralin, trifluralin;

b_{23}) imidazolinones: imazamethapyr, imazapyr, imazaquin, imazethabenzmethyl (imazame) and imazethapyr.

16. (*new*) The composition defined in claim 14, wherein component b) is at least one compound selected from the group consisting of

glufosinate-ammonium, glyphosate, sulfosate, butroxydim, clethodim, cloproxydim, sethoxydim, tralkoxydim, caloxydim, 2-{1-[2-(4-chlorophenoxy)propyloxyimino]butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one, pendimethalin, imazaquin, imazethabenzmethyl and imazethapyr.

17. (*new*) The composition defined in claim 14, wherein component b) is at least one compound selected from the group consisting of

caloxydim, sethoxydim, 2-{1-[2-(4-chlorophenoxy)propyloxyimino]butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one, acifluorfen-sodium and fluoroglycofen-ethyl.

18. (*new*) The composition defined in claim 14, wherein component b) is at least one compound selected from the group consisting of alloxydim, caloxydim, clethodim, cloproxydim, cycloxydim, sethoxydim, tralkoxydim and 2-{1-[2-(4-chloro- phenoxy)propyloxyimino]butyl}-3-hydroxy-5-(2H-tetrahydrothiopyran-3-yl)-2-cyclohexen-1-one.

B1

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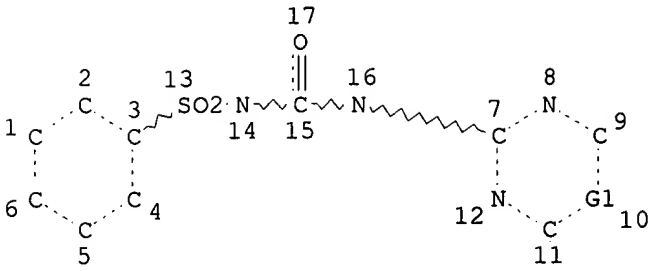
L4 STR



Elected Species Search

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CONNECT IS E3 RC AT 9
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DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
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L9 42295 SEA FILE=HCAPLUS ABB=ON PLU=ON HERBICIDES/CT
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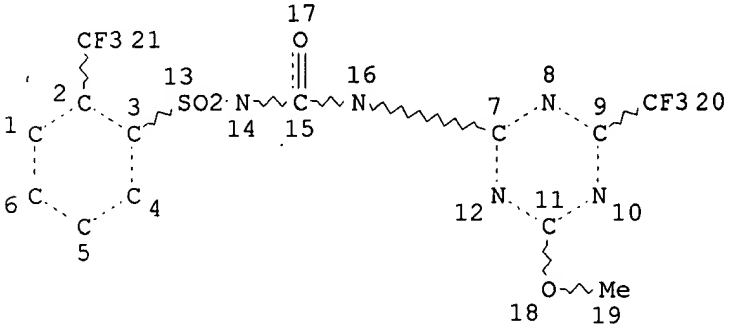

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L19          16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND L13
L20          16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 AND L9


=> d ibib abs hitstr l20 1-16

L20  ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2003:202383  HCAPLUS
DOCUMENT NUMBER:          138:233416
TITLE:                    Synergistic herbicidal mixtures comprising phenyl
                          ketones
INVENTOR(S):              Feucht, Dieter; Dahmen, Peter; Drewes, Mark Wilhelm;
                          Pontzen, Rolf; Hoischen, Dorothee; Mueller,
                          Klaus-Helmut; Schwarz, Hans-Georg; Herrmann, Stefan;
                          Kather, Kristian; Schallner, Otto; Goto, Toshio;
                          Shirakura, Shinichi
PATENT ASSIGNEE(S):       Bayer Cropscience A.-G., Germany
SOURCE:                   PCT Int. Appl., 225 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
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OTHER SOURCE(S):          MARPAT 138:233416
GI
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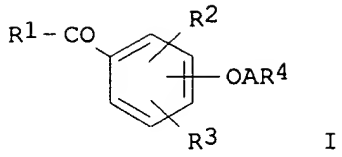

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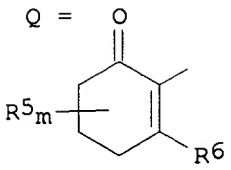
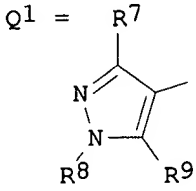


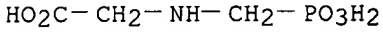


AB The title mixts. comprise an Ph ketone I [A = alkylene; R1 Q, Q1, etc.; R2, R3 = H, NO2, CN, CO2H, (un)substituted alkyl, alkoxy, alkylthio, etc.; R4 = (un)substituted heterocyclyl; R5 = halo, (un)substituted alkyl, alkoxycarbonyl, etc.; R6 = OH, formyloxy, halo, (un)substituted alkoxy, alkylthio, alkylsulfinyl, slkylsulfonyl, etc.; R7 = H, CN, (un)substituted alkoxy, alkylthio, alkylsulfinyl, slkylsulfonyl, etc; R8 = H, (un)substituted alkyl, alkenyl, alkynyl, etc.; R9= OH, formyloxy, (un)substituted alkoxy, alkylcarbonyloxy, etc.; m = 0, 1-6] and any of a very large no. of conventional herbicides, and, optionally, a known safener.

IT **1071-83-6D**, Glyphosate, mixts. with Ph ketones **142469-14-5**, (Tritosulfuron)
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

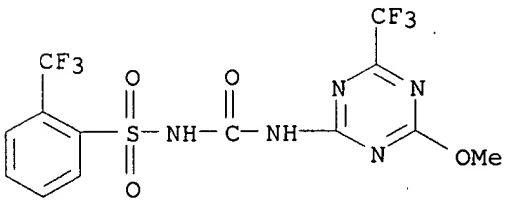
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS

CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



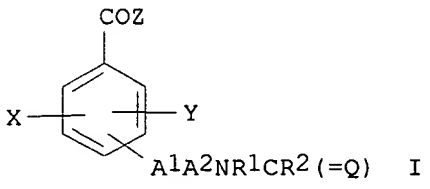
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:173349 HCAPLUS

DOCUMENT NUMBER: 138:200324
TITLE: Synergistic herbicidal compositions comprising aryl ketones
INVENTOR(S): Feucht, Dieter; Dahmen, Peter; Drewes, Mark Wilhelm; Pontzen, Rolf; Hoischen, Dorothee; Mueller, Klaus-Helmut; Schwarz, Hans-Georg; Herrmann, Stefan; Kather, Kristian; Schallner, Otto; Goto, Toshio; Shirakura, Shinichi
PATENT ASSIGNEE(S): Bayer Cropscience AG, Germany; et al.
SOURCE: PCT Int. Appl., 180 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003017766	A2	20030306	WO 2002-EP9236	20020819
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10142334	A1	20030320	DE 2001-10142334	20010830

PRIORITY APPLN. INFO.: DE 2001-10142334 A 20010830
OTHER SOURCE(S): MARPAT 138:200324
GI



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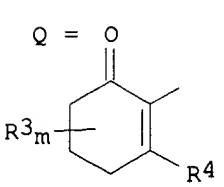
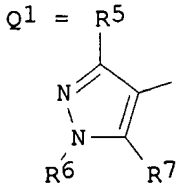


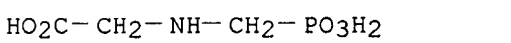


AB Synergistic herbicidal compns. comprise aryl ketones I [A1 = bond or O; A2 = alkylene, alkenediyl or alkynediyl; Q = O or S; R1 = H, (un)substituted

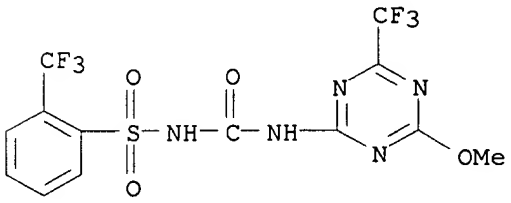
alkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, etc.; R2 = H, amino, cyanamino, nitroamino, etc.; X, Y = H, nitro, cyano, carboxy, carbamoyl, thiocarbamoyl, halo, (un)substituted alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl etc.; Z = Q, Q1, etc.; m = 0, 1-6; R3 = H, halo, (un)substituted alkyl, alkylthio, etc.; R4 = OH, formyloxy, halo, (un)substituted alkoxy, alkylthio, etc.; R5 = H, cyano, carbamoyl, thiocarbamoyl, halo, (un)substituted alkyl, alkoxy, etc.; R6 = H, (un)substituted alkyl, alkenyl, alkynyk, cycloalkyl, etc.; R7 = OH, formyloxy (un)substituted alkoxy, alkylcarbonyloxy, alkoxycarbonyloxy, etc.] and any of a very large no. of known herbicides. Optionally the compns. include safening agents.

IT **1071-83-6D**, Glyphosate, mixts. with aryl ketones
142469-14-5D, Tritosulfuron, mixts. with aryl ketones
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L20 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:5684 HCAPLUS
DOCUMENT NUMBER: 138:68331
TITLE: Synergistic selective herbicidal compositions based on pyrimidine derivatives
INVENTOR(S): Feucht, Dieter; Kremer, Mathias; Fuersch, Helmut; Wellmann, Arndt; Dahmen, Peter; Drewes, Mark Wilhelm; Pontzen, Rolf
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000058	A1	20030103	WO 2002-EP6314	20020610

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10129856 A1 20030102 DE 2001-10129856 20010621

PRIORITY APPLN. INFO.: DE 2001-10129856 A 20010621

OTHER SOURCE(S): MARPAT 138:68331

AB The invention relates to synergistic, selective herbicide combinations consisting of known phenoxypyrimidine derivs., propoxycarbazone sodium or flucarbazone sodium, and any of a very large no. of known herbicides, and, optionally, addnl. safeners.

IT **479485-56-8**

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic selective herbicidal compn.)

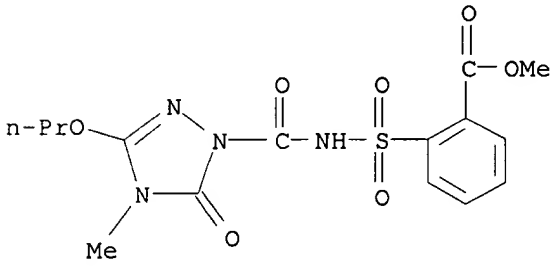
RN 479485-56-8 HCAPLUS

CN Benzoic acid, 2,6-bis[(4,6-dimethoxy-2-pyrimidinyl)oxy]-, sodium salt, mixt. with N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)benzenesulfonamide and methyl 2-[[[(4,5-dihydro-4-methyl-5-oxo-3-propoxy-1H-1,2,4-triazol-1-yl)carbonyl]amino]sulfonyl]benzoate sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 181274-15-7

CMF C15 H18 N4 O7 S . Na

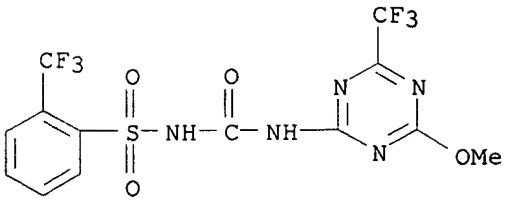


● Na

CM 2

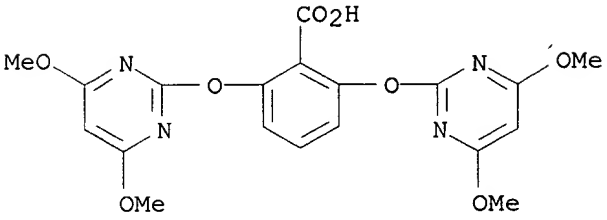
CRN 142469-14-5

CMF C13 H9 F6 N5 O4 S



CM 3

CRN 125401-92-5
CMF C19 H18 N4 O8 . Na

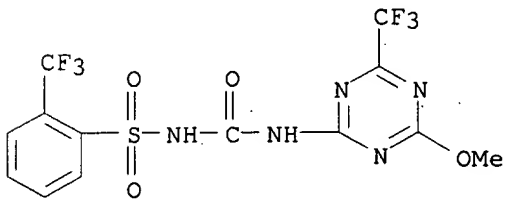


● Na

IT **1071-83-6D**, Glyphosate, mixts. contg. phenoxypyrimidine derivs. and **142469-14-5D**, Tritosulfuron), mixts. contg. phenoxypyrimidine derivs. and
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic selective herbicidal compns.)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:964095 HCAPLUS
DOCUMENT NUMBER: 138:20913
TITLE: Safened herbicidal compositions for maize
INVENTOR(S): Johnson, Mike; Rueegg, Willy T.
PATENT ASSIGNEE(S): Syngenta Participations AG, Switz.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002100171	A1	20021219	WO 2002-EP6463	20020612

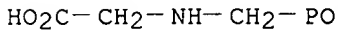
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: CH 2001-1064 A 20010613

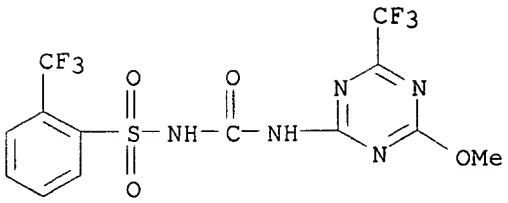
AB Selective herbicidal compn. for controlling grasses and weeds in crops of useful plants, such as maize, comprises (a) a herbicidally effective amt. of a compd. of formula Z-NR1R2 (Markush included) (e.g. metolachlor, S-metolachlor, alachlor, acetochlor, flufenacet, dimethenamid, dimethenamid-P, and pethoxamid), (b) an amt. effective for herbicide antagonism of a herbicide safener, and, optionally, (c) a co-herbicide.

IT **1071-83-6**, Glyphosate **142469-14-5**, Tritosulfuron
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(co-herbicide in safened herbicidal compn. for maize)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

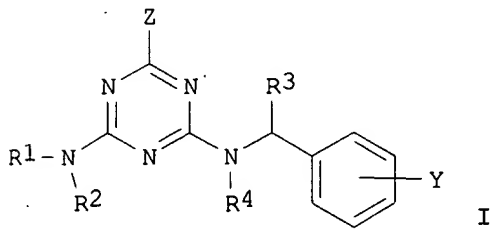
L20 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:791965 HCAPLUS
DOCUMENT NUMBER: 137:290314
TITLE: Synergistic herbicidal compositions
INVENTOR(S): Ahrens, Hartmut; Minn, Klemens; Dietrich, Hansjoerg; Willms, Lothar; Hacker, Erwin; Bieringer, Hermann
PATENT ASSIGNEE(S): Bayer Cropscience GmbH, Germany
SOURCE: Ger. Offen., 32 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10117508	A1	20021017	DE 2001-10117508	20010407
WO 2002080679	A2	20021017	WO 2002-EP3431	20020327
WO 2002080679	A3	20030320		

W: AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR, CU, CZ, DM, DZ, EC, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ, OM, PH, PL, RO, RU, SG, SI, SK, TJ, TM, TN, TT, UA, US, UZ, VN, YU, ZA, AM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003004064	A1	20030102	US 2002-116352	20020404

PRIORITY APPLN. INFO.: DE 2001-10117505 A 20010407
DE 2001-10117508 A 20010407
OTHER SOURCE(S): MARPAT 137:290314
GI



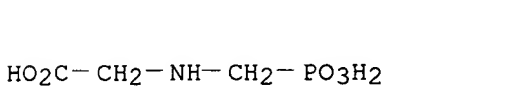
I

AB The title compns. comprise an aminotriazine deriv., I [Z = H, OH, halo, (un)substituted alkyl, alkenyl, etc.; R1,R2 = H, formyl, alkyl, alkenyl, alkynyl, alkylsulfinyl, alkylsulfonyl, etc.; R1R2 = (un)substitutec alkylidene; NR1R2 = heterocyclyl; R3 = halo, CN, NO2, SCN, etc.; R4 = H, formyl, (un)substitued alky, etc.; Y = H, halo, NO2, CN, SCN, etc.]and any of a very large no. of known herbicides.

IT **1071-83-6D**, Glyphosate, mixts. with aminotriazine deriv.
142469-14-5D, Tritosulfuron, mixts. with aminotriazine deriv.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

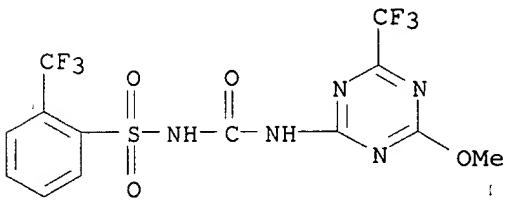
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS

CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L20 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:772140 HCAPLUS
DOCUMENT NUMBER: 137:274423
TITLE: Synergistic herbicidal combinations
INVENTOR(S): Ahrens, Hartmut; Dietrich, Hansjoerg; Willms, Lothar; Hacker, Erwin; Bieringer, Hermann
PATENT ASSIGNEE(S): Bayer Cropscience G.m.b.H., Germany
SOURCE: Ger. Offen., 78 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10117505	A1	20021010	DE 2001-10117505	20010407
WO 2002080679	A2	20021017	WO 2002-EP3431	20020327
WO 2002080679	A3	20030320		

W: AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR, CU, CZ, DM, DZ, EC, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ, OM, PH, PL, RO, RU, SG, SI, SK, TJ, TM, TN, TT, UA, US, UZ, VN, YU, ZA, AM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
WO 2002080680 A2 20021017 WO 2002-EP3432 20020327
WO 2002080680 A3 20030220
W: AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR,
CU, CZ, DM, DZ, EC, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG,
KP, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ,
OM, PH, PL, RO, RU, SG, SI, SK, TJ, TM, TN, TT, UA, US, UZ, VN,
YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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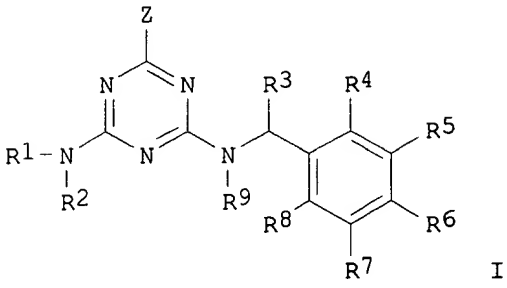
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003087761 A1 20030508 US 2002-116361 20020404
PRIORITY APPLN. INFO.: DE 2001-10117505 A 20010407
DE 2001-10117508 A 20010407

OTHER SOURCE(S): MARPAT 137:274423

GI



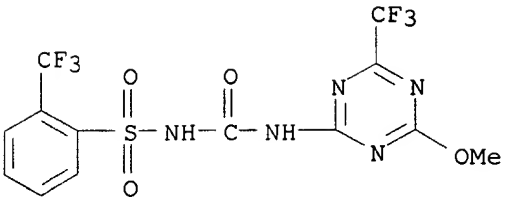
I

AB The title combinations comprise an aminotriazine I [Z = OH, halo, (un)substituted alkyl, etc.; R1, R2 = H, formyl, aminocarbonyl, etc.; R1R2 = (un)substituted alkylidene; NR1R2 = heterocyclyl; R3 = halo, CN, SCN, etc.; R4-8 = halo, NO2, CN, SCN, etc.; R9 = H, formyl, (un)substituted alkyl, etc.]; and one or more of a large no. of known herbicides.

IT **1071-83-6D**, Glyphosate, mixts. with aminotriazine deriv.
142469-14-5D, Tritosulfuron, mixts. with aminotriazine deriv.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



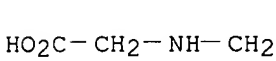
L20 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:584132 HCAPLUS
DOCUMENT NUMBER: 138:102320
TITLE: N-(5,7-dimethoxy[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)arylsulfonamide compounds and their use as herbicides in mixtures
AUTHOR(S): Anon.
CORPORATE SOURCE: UK
SOURCE: Research Disclosure (2002), 459(July), 1230-1231 (No. 459085)
CODEN: RSDSBB; ISSN: 0374-4353
PUBLISHER: Kenneth Mason Publications Ltd.
DOCUMENT TYPE: Journal; Patent
LANGUAGE: English
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RD 459085		20020710		
PRIORITY APPLN. INFO.:			RD 2002-459085	20020710

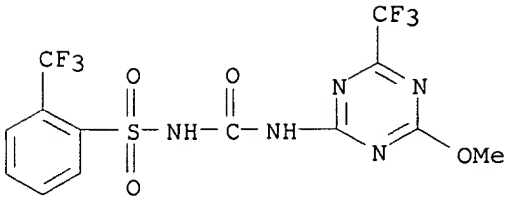
AB N-(5,7-dimethoxy[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)arylsulfonamide compds. were formulated to control a variety of undesirable vegetation. These compds. can be used in combination with other herbicides, herbicide safeners or with humectants. It is preferred to use the compds. with other herbicides that have similar crop selectivity.

IT **1071-83-6D**, Glyphosate, mixts. with N-(5,7-dimethoxy[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)arylsulfonamides
142469-14-5D, Tritosulfuron, mixts. with N-(5,7-dimethoxy[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)arylsulfonamides
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal compn. contg.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



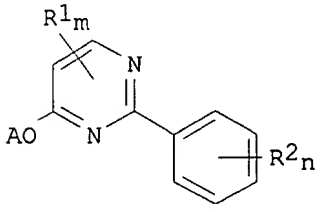
RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L20 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:157489 HCAPLUS
DOCUMENT NUMBER: 136:195645
TITLE: Synergistic herbicidal mixtures containing 2-phenyl-4-(hetero)aryloxypyrimidine
INVENTOR(S): Baltruschat, Helmut Siegfried; Brandt, Astrid
PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002015694	A2	20020228	WO 2001-EP9799	20010824
WO 2002015694	A3	20020620		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002010461	A5	20020304	AU 2002-10461	20010824
US 2002055435	A1	20020509	US 2001-938370	20010824
EP 1313369	A2	20030528	EP 2001-978304	20010824
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-228317P P 20000825
WO 2001-EP9799 W 20010824
OTHER SOURCE(S): MARPAT 136:195645
GI



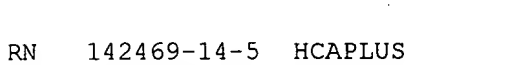
I

AB A herbicidal compn. comprises a herbicidally acceptable carrier and/or surface active agent and, as active ingredient, a synergistically effective amt. of (1) at least one 2-phenyl-4-(hetero)aryloxypyrimidine I (A = (un)substituted Ph, (un)substituted 5- or 6-membered nitrogen-contg. heteroarom., difluorobenzodioxolyl; m represents an = 0-2; n = 0-5; R1 = halo, (un)substituted alkyl, alkenyl, alkinyl, alkoxy, alkoxyalkyl, dialkoxyalkyl, alkoxyalkoxy, alkylthio, amino, alkylamino, dialkylamino, alkoxyamino or formamidino; R2 = halo, (un)substituted alkyl, alkenyl, alkinyl, haloalkyl, haloalkoxy, alkoxy, alkoxyalkyl, alkoxyalkoxy, alkylthio, haloalkylthio, nitro, cyano, SF5, alkylsulfonyl, or alkylsulfinyl) or its environmentally compatible salts;and (2) at least one addnl. herbicidal compd., which is active against broad-leaved weeds and/or annual grasses; and/or (3) at least one addnl. safening compd.

IT **1071-83-6D**, Glyphosate, mixts. with 2-phenyl-4-(hetero)aryloxypyrimidines **142469-14-5D**, Tritosulfuron, mixts. with 2-phenyl-4-(hetero)aryloxypyrimidines
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns. contg.)

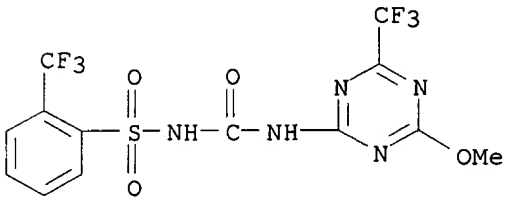
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS

CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L20 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:564782 HCAPLUS

DOCUMENT NUMBER: 135:133439

TITLE: Synergistic selective herbicidal compositions for maize and sugar cane comprising pyridine derivatives

INVENTOR(S): Rueegg, Willy T.

PATENT ASSIGNEE(S): Syngenta Participations A.-G., Switz.

SOURCE: PCT Int. Appl., 267 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

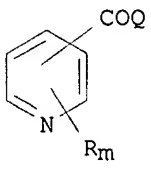
WO 2001054501	A2	20010802	WO 2001-EP720	20010123
WO 2001054501	A3	20020103		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2001007811	A	20021022	BR 2001-7811	20010123
EP 1250047	A2	20021023	EP 2001-909680	20010123
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:

CH 2000-139	A	20000125
CH 2000-1150	A	20000609
WO 2001-EP720	W	20010123

OTHER SOURCE(S): MARPAT 135:133439

GI



I

AB A selective herbicidal synergistic compn. comprises, in addn. to customary inert formulation adjuvants, a pyridine deriv. I (Markush included) in a mixt. with synergistically effective amt. of one or more known herbicides selected from metribuzine, aclonifen, glyphosate, bentazon, pendimethalin, etc. The compns. according to the invention may also comprise a safener.

IT **1071-83-6D**, Glyphosate, mixts. with pyridine derivs.
142469-14-5D, mixts. with pyridine derivs.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic selective herbicidal compns. for maize and sugar cane comprising)

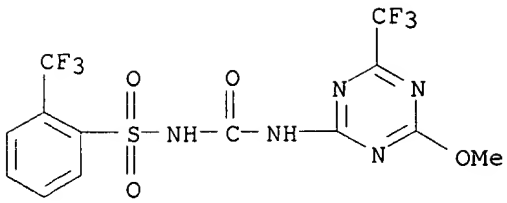
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 142469-14-5 HCAPLUS

CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L20 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:375359 HCAPLUS
DOCUMENT NUMBER: 134:362756
TITLE: Synergistic herbicidal compositions containing tritosulfuron
INVENTOR(S): Kremer, Mathias; Feucht, Dieter; Wellmann, Arndt; Dahmen, Peter; Krauskopf, Birgit
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 12 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19960918	A1	20010523	DE 1999-19960918	19991217
WO 2001035741	A2	20010525	WO 2000-EP11017	20001108
WO 2001035741	A3	20011227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000015701	A	20020723	BR 2000-15701	20001108
EP 1233672	A2	20020828	EP 2000-971436	20001108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: DE 1999-19955407 A1 19991118
DE 1999-19960918 A 19991217
WO 2000-EP11017 W 20001108

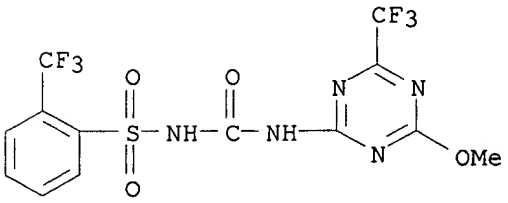
AB The invention concerns synergistic herbicidal combinations contg. tritosulfuron and any of a large no. of known herbicides and optionally safeners.

IT **1071-83-6D**, Glyphosate, mixts. contg. tritosulfuron and **142469-14-5D**, Tritosulfuron, mixts. contg.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L20 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:133399 HCAPLUS
DOCUMENT NUMBER: 132:162401
TITLE: Synergistic herbicidal mixtures for tolerant or resistant corn
INVENTOR(S): Hacker, Erwin; Bieringer, Hermann; Willms, Lothar
PATENT ASSIGNEE(S): Hoechst Schering Agrevo G.m.b.H., Germany
SOURCE: PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008936	A1	20000224	WO 1999-EP5796	19990810
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19836737	A1	20000217	DE 1998-19836737	19980813
DE 19919993	A1	20001102	DE 1999-19919993	19990430
CA 2340013	AA	20000224	CA 1999-2340013	19990810
AU 9957321	A1	20000306	AU 1999-57321	19990810
BR 9913638	A	20010522	BR 1999-13638	19990810
EP 1104243	A1	20010606	EP 1999-944356	19990810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002522458	T2	20020723	JP 2000-564450	19990810
BG 105229	A	20011130	BG 2001-105229	20010208

PRIORITY APPLN. INFO.: DE 1998-19836737 A 19980813
DE 1999-19919993 A 19990430
WO 1999-EP5796 W 19990810
OTHER SOURCE(S): MARPAT 132:162401

AB The title mixts. comprise on one hand glyphosate or its salt, glufosinate or its salts, imidazolinone derivs., azole deriv. protoporphyrinogen oxidase inhibitors, cyclohexanedione herbicides or heteroaryloxyphenoxypropionic acid herbicides, and on the other hand any of a large no. of herbicides, such as cyanazine, atrazine, terbutylazine, acetochlor, metolachlor, alachlor, terbutryn, benoxacor, etc.

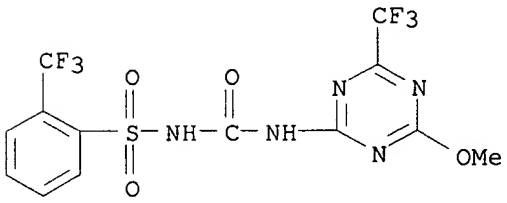
IT **259150-67-9**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compn. for corn)

RN 259150-67-9 HCAPLUS

CN Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt, mixt. with N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)benzenesulfonamide (9CI) (CA INDEX NAME)

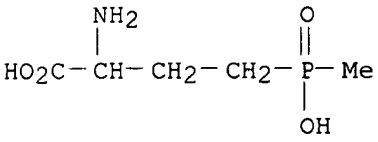
CM 1

CRN 142469-14-5
CMF C13 H9 F6 N5 O4 S



CM 2

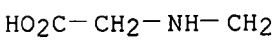
CRN 77182-82-2
CMF C5 H12 N O4 P . H3 N



IT **1071-83-6D**, Glyphosate, mixts. contg. **142469-14-5D**, Lab271272, mixts. contg.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns. for corn)

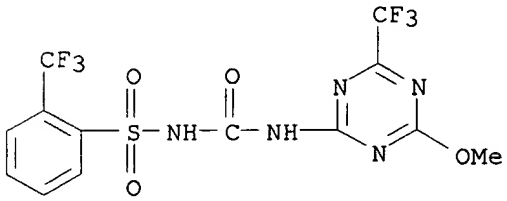
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



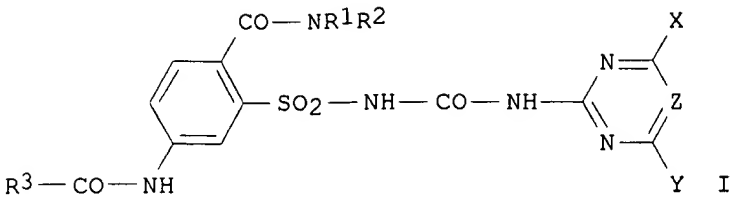
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:133395 HCAPLUS
DOCUMENT NUMBER: 132:162400
TITLE: Synergistic herbicidal compositions comprising acylated aminophenylsulfonylurea derivatives.
INVENTOR(S): Hacker, Erwin; Bieringer, Hermann; Schnabel, Gerhard
PATENT ASSIGNEE(S): Hoechst Schering Agrevo G.m.b.H., Germany
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008932	A1	20000224	WO 1999-EP5800	19990810
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19836725	A1	20000217	DE 1998-19836725	19980813
DE 19919853	A1	20001102	DE 1999-19919853	19990430
CA 2340241	AA	20000224	CA 1999-2340241	19990810
AU 9956207	A1	20000306	AU 1999-56207	19990810
BR 9913641	A	20010605	BR 1999-13641	19990810
EP 1104239	A1	20010606	EP 1999-942833	19990810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002522456	T2	20020723	JP 2000-564446	19990810

PRIORITY APPLN. INFO.:
DE 1998-19836725 A 19980813
DE 1999-19919853 A 19990430
WO 1999-EP5800 W 19990810

OTHER SOURCE(S): MARPAT 132:162400
GI

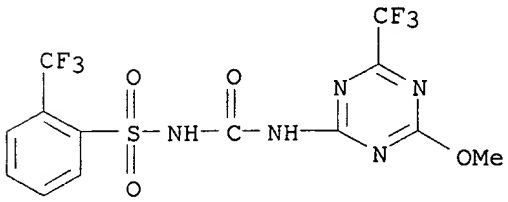


AB The title compns. comprise an acylated aminophenylsulfonylurea deriv. I [R1, R2 = H or alkyl; R3 = H, (un)substituted alkyl, alkoxy, alkenoxy, alkynoxy or cycloa;kyl; X, Y = halo, (un)substituted alkyl, alkoxy or alkylthio; Z = CH or N] or I salts and any of a large no. of known herbicides, such as alachlor, metolachlor, acetochlor, dimethenamid, pethoxamid, atrazine, simazine, etc.

IT **1071-83-6D**, Glyphosate, mixts. with aminophenylsulfonylurea derivs. **142469-14-5D**, Tritosulfuron, mixts. with aminophenylsulfonylurea derivs.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:115769 HCAPLUS
DOCUMENT NUMBER: 132:133625
TITLE: Synergistic herbicidal mixtures for tolerant or resistant corn
INVENTOR(S): Hacker, Erwin; Bieringer, Hermann; Willms, Lothar
PATENT ASSIGNEE(S): Hoechst Schering Agrevo G.m.b.H., Germany
SOURCE: Ger. Offen., 14 pp.

CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19836737	A1	20000217	DE 1998-19836737	19980813
CA 2340013	AA	20000224	CA 1999-2340013	19990810
WO 2000008936	A1	20000224	WO 1999-EP5796	19990810
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9957321	A1	20000306	AU 1999-57321	19990810
BR 9913638	A	20010522	BR 1999-13638	19990810
EP 1104243	A1	20010606	EP 1999-944356	19990810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002094934	A1	20020718	US 1999-370373	19990810
JP 2002522458	T2	20020723	JP 2000-564450	19990810
BG 105229	A	20011130	BG 2001-105229	20010208

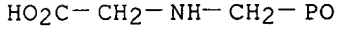
PRIORITY APPLN. INFO.: DE 1998-19836737 A 19980813
DE 1999-19919993 A 19990430
WO 1999-EP5796 W 19990810

OTHER SOURCE(S): MARPAT 132:133625

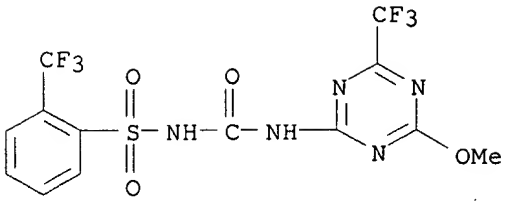
AB The title mixts. comprise on one hand glufosinate or its salts, glyphosate or its salts, imidazolinone derivs., azole protoporphyrinogen oxidase inhibitors or cyclohexadione herbicides, and on the other hand any of a large no. of herbicides, such as cyanazine, atrazine, terbuthylazine, acetochlor, metolachlor, alachlor, terbutryn, benoxacor, nicosulfuron, etc.

IT **1071-83-6D**, Glyphosate, mixts. contg. **142469-14-5**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns. for tolerant or resistant corn)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)

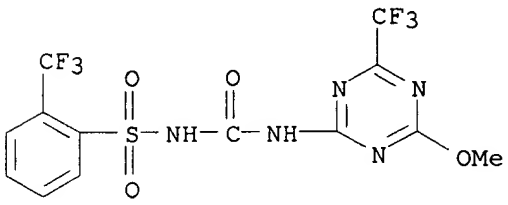


L20 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:115764 HCAPLUS
DOCUMENT NUMBER: 132:133623
TITLE: Synergistic herbicidal compositions for tolerant or resistant cereals
INVENTOR(S): Hacker, Erwin; Bieringer, Hermann; Willms, Lothar
PATENT ASSIGNEE(S): Hoechst Schering Agrevo G.m.b.H., Germany
SOURCE: Ger. Offen., 16 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19836700	A1	20000217	DE 1998-19836700	19980813
CA 2340193	AA	20000224	CA 1999-2340193	19990810
WO 2000008940	A1	20000224	WO 1999-EP5801	19990810
W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9955128	A1	20000306	AU 1999-55128	19990810
BR 9913006	A	20010508	BR 1999-13006	19990810
EP 1104992	A1	20010613	EP 1999-941559	19990810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002522460	T2	20020723	JP 2000-564454	19990810
US 2003022792	A1	20030130	US 1999-371770	19990810

PRIORITY APPLN. INFO.: DE 1998-19836700 A 19980813
WO 1999-EP5801 W 19990810
OTHER SOURCE(S): MARPAT 132:133623
AB The title compns. comprise on one hand glufosinate or its salts, glyphosate or its salts, imidazolinone deriv. or azole protoporphyrinogen oxidase inhibitors, and on the other hand any of a large no. of herbicides, such as isoproturon, chlortoluron, fluthiamid, diflufenican, etc.
IT **1071-83-6D**, Glyphosate, mixts. contg. **142469-14-5D**, mixts. contg.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns. for tolerant or resistant cereals)
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)

L20 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:811030 HCAPLUS
DOCUMENT NUMBER: 132:20093
TITLE: Synergistic herbicidal mixtures.
INVENTOR(S): Sievernich, Bernd; Landes, Max; Kibler, Elmar; Von Deyn, Wolfgang; Walter, Helmut; Otten, Martina; Westphalen, Karl-Otto; Vantieghem, Herve
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9965314	A1	19991223	WO 1999-EP4055	19990612
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RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2334955	AA	19991223	CA 1999-2334955	19990612
AU 9946089	A1	20000105	AU 1999-46089	19990612
BR 9911313	A	20010313	BR 1999-11313	19990612
EP 1087664	A1	20010404	EP 1999-929190	19990612
EP 1087664	B1	20030528		
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EE 200000754	A	20020415	EE 2000-754	19990612
JP 2002518303	T2	20020625	JP 2000-554204	19990612
NO 2000006315	A	20001212	NO 2000-6315	20001212
US 6534444	B1	20030318	US 2000-719429	20001212
BG 105144	A	20011231	BG 2001-105144	20010111

PRIORITY APPLN. INFO.: DE 1998-19826431 A 19980616

WO 1999-EP4055 W 19990612

OTHER SOURCE(S): MARPAT 132:20093

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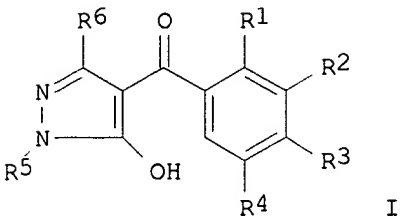

I

AB The invention relates to synergistic herbicidal mixts. contg. at least one benzoylpyrazole deriv. I [R1, R3 = H, halo, alkyl, alkyl halide, alkoxy, alkoxy halide, alkylthio, alkyl sulfinyl, or alkyl sulfonyl; R2= (un)substituted thiazole-2-yl, thiazole-4-yl, thiazole-5-yl, isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, 4,5-dihydroisoxazol-3-yl, 4,5-dihydroisoxazol-4-yl or 4,5-dihydroisoxazol-5-yl; R4 = H, halo or alkyl; R5 = alkyl; R6 = H or alkyl] or I salts and at least one herbicide from the group of acetyl CoA carboxylase inhibitors (ACC), acetolactate synthase inhibitors (ALS), amides, auxin herbicides, auxin transport inhibitors, carotenoid biosynthesis inhibitors, enolpyruvyl-shikimate-3-phosphate synthase inhibitors (ESPS), glutamine synthetase inhibitors, lipid biosynthesis inhibitors, mitosis inhibitors, protoporphyrinogen-IX-oxidase inhibitors, photosynthesis inhibitors, synergistic agents, growth substances, cell wall biosynthesis inhibitors and various other herbicides.

IT **252190-62-8**

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic herbicide)

RN 252190-62-8 HCAPLUS

CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)-, mixt. with [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)methanone (9CI) (CA INDEX NAME)

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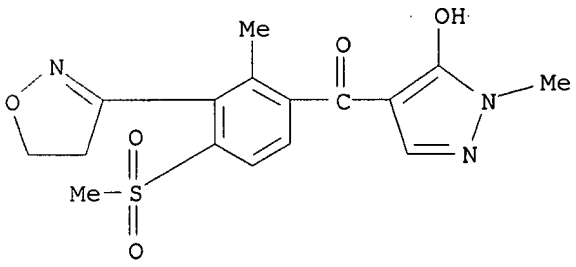
CMF C16 H17 N3 O5 S



CM 2

CRN 142469-14-5
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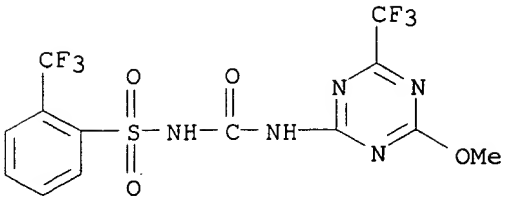
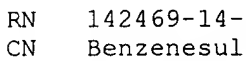
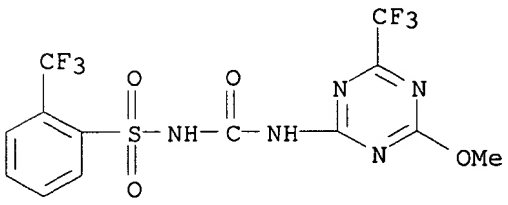


IT **1071-83-6D**, mixts. with benzoylpyrazole derivs.
142469-14-5D, mixts. with benzoylpyrazole derivs.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicides)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:281141 HCAPLUS
DOCUMENT NUMBER: 126:260438
TITLE: Synergistic herbicidal mixtures
INVENTOR(S): Landes, Max; Sievernich, Bernd; Walter, Helmut; Westphalen, Karl-Otto; Mayer, Horst; Mulder, Christian; Schoenhammer, Alfons; Hamprecht, Gerhard; Nuyken, Wessel; Kibler, Elmar; Haden, Egon
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 42316 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19534910	A1	19970327	DE 1995-19534910	19950920
CA 2230113	AA	19970327	CA 1996-2230113	19960912
WO 9710714	A1	19970327	WO 1996-EP3996	19960912
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RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9671281	A1	19970409	AU 1996-71281	19960912
AU 710367	B2	19990916		
EP 859548	A1	19980826	EP 1996-932502	19960912
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, SI, LV, FI				
CN 1200652	A	19981202	CN 1996-197808	19960912
BR 9610586	A	19990706	BR 1996-10586	19960912
NZ 319131	A	20000128	NZ 1996-319131	19960912
JP 2000501377	T2	20000208	JP 1997-512365	19960912
IL 123609	A1	20010319	IL 1996-123609	19960912
US 6054410	A	20000425	US 1998-43314	19980217
NO 9801240	A	19980319	NO 1998-1240	19980319
US 6362133	B1	20020326	US 2000-520224	20000307
CN 1338207	A	20020306	CN 2001-121639	20010619
CN 1338208	A	20020306	CN 2001-121640	20010619
CN 1342407	A	20020403	CN 2001-121641	20010619
US 2002198106	A1	20021226	US 2001-977146	20011015

PRIORITY APPLN. INFO.: DE 1995-19534910 A 19950920
WO 1996-EP3996 W 19960912
US 1998-43314 A3 19980217
US 2000-520224 A3 20000307

OTHER SOURCE(S): MARPAT 126:260438
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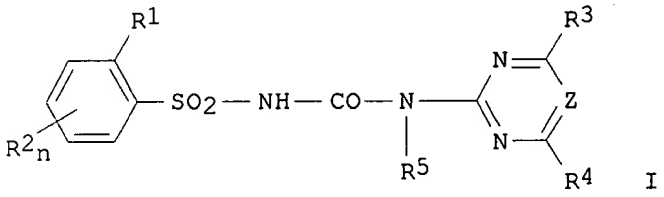


I

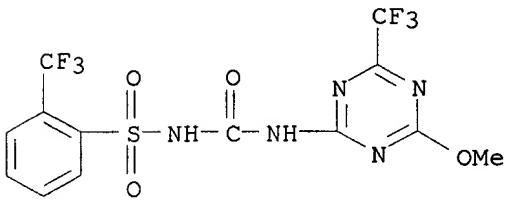
AB The title mixts. comprise a sulfonylurea deriv. I [R1 = (ub)substituted alkyl, halo, etc.; R2 = H, alkyl, alkenyl, alkynyl, etc.; R3 = F, CF3, CF2Cl, etc.; R4 = alkoxy, alkyl, alkylthio, alkylamino, etc.; R5 = H, alkoxy, alkyl; Z = N or CH; n = 0, 1-3] and any of a large no. of known herbicides, such as buthidazole, cyprazole, allidochlor, benzoylprop-Et, bromobutide, chlorthiamid, dimepiperate, dimethenamide, etc.

IT **1071-83-6D**, Glyphosate, mixts. with sulfonylurea derivs.
142469-14-5D, mixts. contg.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 142469-14-5 HCAPLUS
CN Benzenesulfonamide, N-[[[4-methoxy-6-(trifluoromethyl)-1,3,5-triazin-2-yl]amino]carbonyl]-2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



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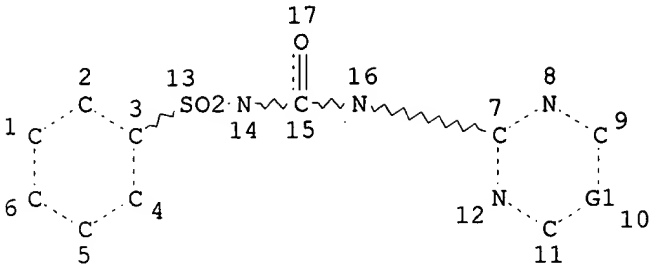

Search for a) of Claim 1 and b) = glyphosate

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
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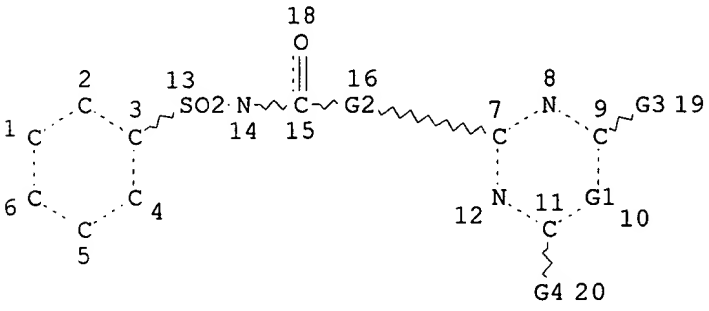

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Ak~N~Ak 49 @50 51 Ak~X @52 53 O~Ak~X @54 55 56

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NUMBER OF NODES IS 56

STEREO ATTRIBUTES: NONE
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L9 42295 SEA FILE=HCAPLUS ABB=ON PLU=ON HERBICIDES/CT
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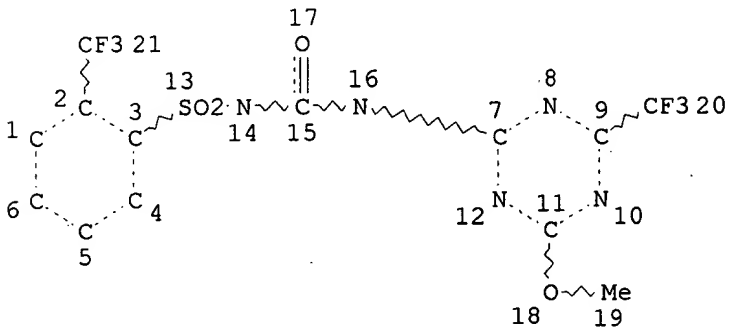
L16 STR



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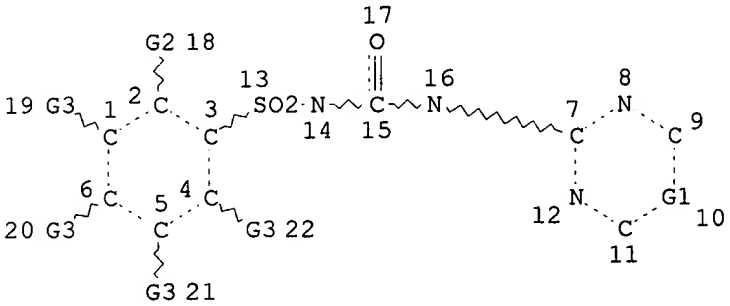

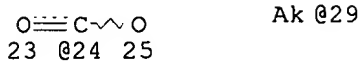

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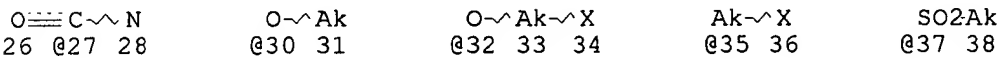

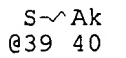

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DEFAULT ECLEVEL IS LIMITED

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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 40

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L39         133 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35 AND PY<1998
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=> d ibib ab hitstr l39 1-133

L39 ANSWER 1 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:738866 HCAPLUS
DOCUMENT NUMBER: 133:292313
TITLE: Herbicidal compositions containing DMSO as efficiency enhancer
INVENTOR(S): Smale, Bernard
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 5 pp., Cont.-in-part of U. S. Ser. No. 788,243.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
US 6133200	A	20001017	US 1999-298862	19990426	
US 5597778	A	19970128	US 1995-475987	19950607	<--
US 2002049139	A1	20020425	US 2001-917696	20010731	

PRIORITY APPLN. INFO.: US 1994-300267 B2 19940902
US 1995-475987 A2 19950607
US 1997-788243 A2 19970127

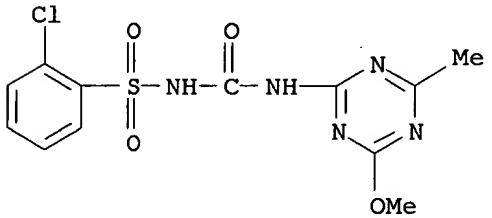
AB The addn. of DMSO to herbicidal compns. makes it possible to decrease the amt. of active herbicidal agent required for desired activity without loss of effectiveness against target plants. In some instances, it may be advisable to use up to as 5% DMSO. The addn. of the DMSO makes it possible to provide a liq. of relatively high stability.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
90982-32-4, Chlorimuron-ethyl
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicidal activity enhancement with DMSO)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

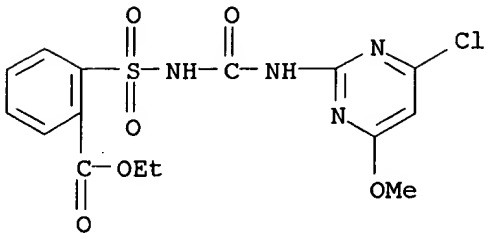
$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 90982-32-4 HCAPLUS

CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 2 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:35291 HCAPLUS
DOCUMENT NUMBER: 132:46267
TITLE: Glyphosate and sulfonylurea-containing wettable powder of dry land herbicide
INVENTOR(S): Wang, Yicheng
PATENT ASSIGNEE(S): Loudi Prefecture Agricultural Sci. Inst., Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1167571	A	19971217	CN 1996-118213	19960611 <--

PRIORITY APPLN. INFO.: CN 1996-118213 19960611

AB The herbicide consists of glyphosate and sulfonylurea (metsulfuron, bensulfuron or tribenuron). The manuf. process comprises mixing carriers and assistant agents with the main components, and smashing them by using airflow. The carriers can be diatomite, kaolin, and white carbon black. It is suitable for using in orchards, tea gardens, forest and other ridges of fields.

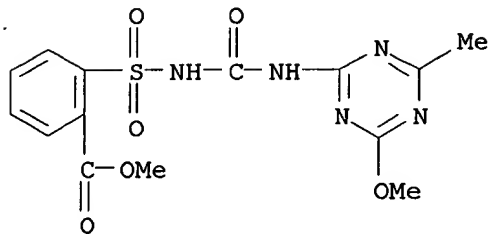
IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron methyl **106040-48-6**, Tribenuron
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(glyphosate and sulfonylurea-contg. wettable powder of dry land herbicide)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

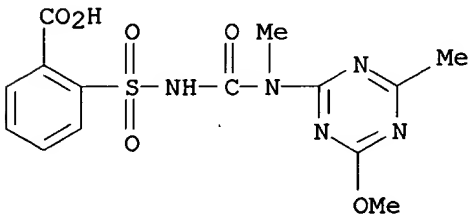
$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-

yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 106040-48-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

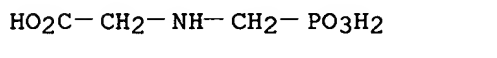


L39 ANSWER 3 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:22910 HCAPLUS
DOCUMENT NUMBER: 128:136571
TITLE: Two complementary bioassays for screening the estrogenic potency of xenobiotics: recombinant yeast for trout estrogen receptor and trout hepatocyte cultures
AUTHOR(S): Petit, F.; Le Goff, P.; Cravedi, J.-P.; Valotaire, Y.; Pakdel, F.
CORPORATE SOURCE: Equipe d'Endocrinol. Mol. Reproduction, Univ. Rennes I, Rennes, 35042, Fr.
SOURCE: Journal of Molecular Endocrinology (**1997**), 19(3), 321-335
CODEN: JMLEEI; ISSN: 0952-5041
PUBLISHER: Journal of Endocrinology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A relation between the chem. structure of a xenobiotic and its steroidal action has not yet been clearly established. Thus, it is not possible to define the estrogenic potency of different xenobiotics. An assessment may be accomplished by the use of different bioassays. We have previously developed a yeast system highly and stably expressing rainbow trout estrogen receptor (rtER) in order to analyze the biol. activity of the receptor. The recombinant yeast system appears to be a reliable, rapid and sensitive bioassay for the screening and detn. of the direct interaction between ER and estrogenic compds. This system was used in parallel with a more elaborate biol. system, trout hepatocyte aggregate cultures, to examine the estrogenic potency of a wide spectrum of chems.

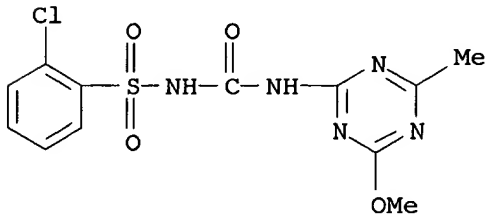
commonly found in the environment. In hepatocyte cultures, the vitellogenin gene whose expression is principally dependent upon estradiol was used as a biomarker. Moreover, competitive binding assays were performed to det. direct interaction between rtER and xenobiotics. In our study, 50% of the 49 chem. compds. tested exhibited estrogenic activity in the two bioassays: the herbicide diclofop-methyl; the fungicides biphenyl, dodemorph, and triadimefon; the insecticides lindane, methyl parathion, chlordecone, dieldrin, and endosulfan; polychlorinated biphenyl mixts.; the plasticizers or detergents alkylphenols and phthalates; and phytoestrogens. To investigate further biphenyl estrogenic activity, its principal metabolites were also tested in both bioassays. Among these estrogenic compds., 70% were able to activate rtER in yeast and hepatocytes with variable induction levels according to the system. Nevertheless, 30% of these estrogenic compds. exhibited estrogenic activity in only one of the bioassays, suggesting the implication of metabolites or different pathways in the activation of gene transcription. This paper shows that it is important to combine in vivo bioassays with in vitro approaches to elucidate the mechanism of xenoestrogen actions.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(two complementary bioassays for screening estrogenic potency of xenobiotics, recombinant yeast for trout estrogen receptor and trout hepatocyte cultures)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 4 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:804352 HCAPLUS
DOCUMENT NUMBER: 128:71939
TITLE: Potential for herbicide residues to contaminate Australian soils and waters
AUTHOR(S): Walker, S. R.; Hargreaves, P. A.; Noble, R. M.
CORPORATE SOURCE: Dep. Primary Industries, Queensland Wheat Res. Inst., Toowoomba, QLD 4350, Australia

SOURCE: Herbicide-Resistant Crops and Pastures in Australian Farming Systems, Proceedings of a Workshop, Canberra, Australia, Mar. 15-16, 1995 (**1995**), 191-199. Editor(s): McLean, George D.; Evans, Graeme. Bureau of Resource Sciences: Parkes, Australia. CODEN: 65LNAZ

DOCUMENT TYPE: Conference

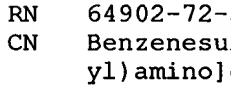
LANGUAGE: English

AB Examples are given of the types and amts. of herbicides used in the Condamine-Balonne catchment, a major winter and summer cropping region of southern Queensland. The question is raised whether these herbicides pose any potential environmental hazards. Examples of recent residue studies in Australian soils and waters, with emphasis on the northern grain region, are presented for 2,4-D, atrazine, chlorsulfuron, diuron, fluometuron, glyphosate, picloram, prometryn, and trifluralin. The implications of these residues for the environment and agriculture, including the development of herbicide-resistant crops, are discussed.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: AGR (Agricultural use); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(herbicide residues contamination of Australian soils and waters)

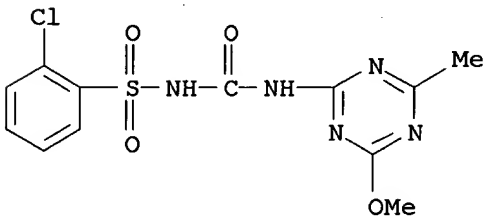
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 5 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:798874 HCAPLUS

DOCUMENT NUMBER: 128:71920

TITLE: Influence of postemergence herbicides on tropical soda apple (Solanum viarum) and bahiagrass (Paspalum notatum)

AUTHOR(S): Akanda, Rais U.; Mullahey, J. Jeffrey; Dowler, Clyde C.; Shilling, Donn G.

CORPORATE SOURCE: Southwest Florida Research and Education Center, University of Florida, Immokalee, FL, 33934, USA

SOURCE: Weed Technology (**1997**), 11(4), 656-661
CODEN: WETEE9; ISSN: 0890-037X

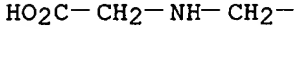
PUBLISHER: Weed Science Society of America

DOCUMENT TYPE: Journal
LANGUAGE: English

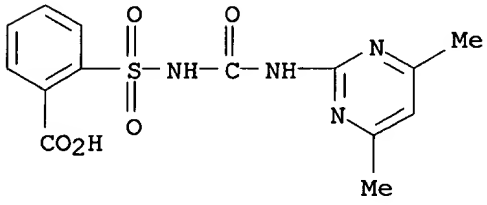
AB Greenhouse and field expts. were conducted to evaluate herbicidal efficacy on tropical soda apple and bahiagrass. Acifluorfen, clopyralid, dicamba, fluroxypyr, picloram, and triclopyr were the most effective postemergence herbicides, providing > 90% control of tropical soda apple plants with no injury to bahiagrass 145 days after treatment (DAT). Glyphosate and imazapyr resulted in effective (> 90%) control of both seedling and mature tropical soda apple plants. However, these herbicides caused severe (> 90%) damage to bahiagrass. Control of tropical soda apple with 2,4-D, AC-263,222, diuron, fomesafen, lactofen, MSMA, sulfometuron, and triasulfuron was unacceptable (< 90%).

IT **1071-83-6**, Glyphosate **74223-56-6**, Sulfometuron
82097-50-5, Triasulfuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(tropical soda apple control by postemergence herbicides in bahiagrass)

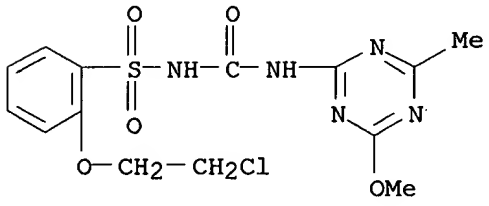
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 82097-50-5 HCAPLUS
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



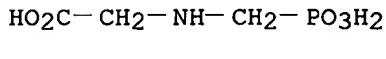
L39 ANSWER 6 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:788244 HCAPLUS
DOCUMENT NUMBER: 128:71944

TITLE: Efficacy of post-emergence herbicides on torpedograss (Panicum repens L.)
AUTHOR(S): Hossain, Md. Amzad; Ishimine, Yukio; Kuramochi, Hitoshi; Akamine, Hikaru; Murayama, Seiichi; Konnai, Makoto
CORPORATE SOURCE: United Grad. Sch. Agric. Sci., Kagoshima Univ., Kagoshima, 890, Japan
SOURCE: Zasso Kenkyu (**1997**), 42(3), 197-205
CODEN: ZASKAN; ISSN: 0372-798X
PUBLISHER: Nippon Zasso Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: English

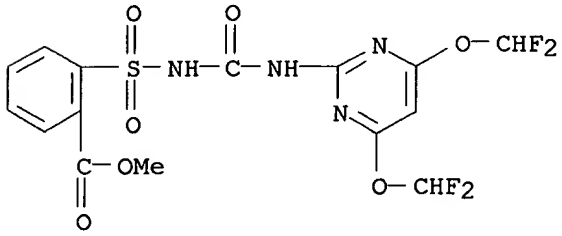
AB Torpedograss (Panicum repens L.) is a perennial rhizomatous weed in 19 crops, orchards, golf courses and fallow lands in tropical and subtropical areas. Twenty-seven different herbicides with different characteristics were tested for their herbicidal efficacy on torpedograss on Okinawa island. Among them the following herbicides showed higher efficacy on torpedograss. Hexazinone at 5.0-10.0 kg ai/ha controlled 47-60% of shoots, 95-100% of rhizome buds and 48-59% of corms. Glyphosate at 1.5-3.0 ai/ha controlled 40-67% of shoots, 82-97% of rhizome buds and 62-65% of corms. Glufosinate at 1.5-3.0 kg ai/ha controlled 80-99% of shoots, 91-100% of rhizome buds and 49-88% of corms. Bialaphos at 1.5-3.0 kg ai/ha controlled 57-67% of shoots,56-72% of rhizome buds and 25-50% of corms and asulam at 2.0-4.0 kg ai/ha controlled 60-87% of shoots, 92-95% of rhizome buds and 90-92% of corms. The exptl. results suggested that hexazinone, asulam, glyphosate, bialaphos and glufosinate were effective herbicides for torpedograss control on Okinawa island.

IT **1071-83-6**, Glyphosate **86209-51-0**, Primisulfuron-methyl
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(torpedograss control by)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 7 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:761548 HCAPLUS
DOCUMENT NUMBER: 128:85289
TITLE: Evaluation of effects of common aerially-applied soybean herbicides and propanil on the plankton communities of aquaculture ponds
AUTHOR(S): Perschbacher, Peter W.; Stone, Nathan; Ludwig, Gerald M.; Guy, Charles B., Jr.
CORPORATE SOURCE: University of Arkansas at Pine Bluff, Pine Bluff, AR, 71611, USA
SOURCE: Aquaculture (**1997**), 157(1,2), 117-122
CODEN: AQCLAL; ISSN: 0044-8486
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

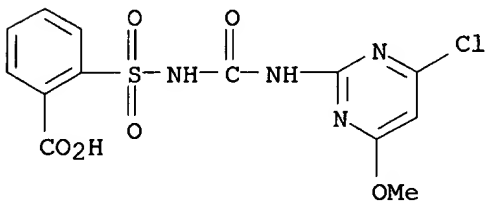
AB Eight, common, aerially-applied herbicides for soybeans and the rice herbicide propanil were tested for possible adverse impacts on pond phytoplankton productivity, zooplankton populations and crit. water quality variables. Treatments simulated direct spraying of ponds and bracketed amts. of drift judged able to reach the pond at 1/10 and 1/100 direct rates. The study was conducted in 12, 500-l outdoor pool mesocosms. Pond water was pumped from an adjacent fingerling rearing pond. Water quality measurements were made prior to application and at 24 and 48 h after application. Com. compds. tested and full rates (kg active ha-1) were fomesafen, acifluorfen and glyphosate (0.43); bentazon (0.57); imazaquin (0.14); fluazifop (0.10); clethodim (0.07); chlorimuron (0.0045); and propanil (0.45 kg). Ten of 1152 soybean herbicide means significantly differed and without pattern. Thus, these herbicides were judged not to affect pond plankton or assocd. water quality. Propanil at the full rate reduced primary productivity and morning oxygen to crit. levels for 3 days.

IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(common aerially-applied soybean herbicides and propanil effects on the plankton communities of aquaculture ponds)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

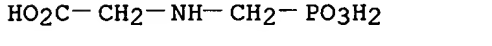


L39 ANSWER 8 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:695714 HCAPLUS
DOCUMENT NUMBER: 127:315733
TITLE: Herbicides for controlling weeds in Mercury Bay weed
AUTHOR(S): Harrington, K. C.; Zhang, T.
CORPORATE SOURCE: Department of Plant Science, Massey University, Palmerston North, N. Z.
SOURCE: Proceedings of the New Zealand Plant Protection Conference (**1997**), 50th, 462-466
CODEN: PNZCEJ; ISSN: 1172-0719
PUBLISHER: New Zealand Plant Protection Society
DOCUMENT TYPE: Journal
LANGUAGE: English

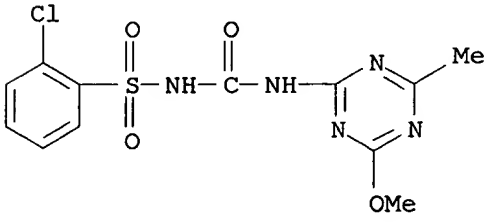
AB Although Mercury Bay weed (Dichondra micrantha) has been used as an alternative lawn species in New Zealand, it has not been a popular option as poor information on its herbicide tolerance makes weed control difficult. Three herbicide tolerance trials were conducted on potted Mercury Bay weed plants, two on established Mercury Bay weed and one on plants establishing from seed or transplanted stolon fragments. Established Mercury Bay weed tolerated clopyralid, tribenuron, chlorsulfuron, haloxyfop, oryzalin, oxadiazon and low rates of paraquat/diquat, glufosinate and glyphosate. Young seedlings tolerated none of the pre-emergence treatments used, but post-emergence applications of clopyralid, tribenuron and oryzalin were safe. Mercury Bay weed establishing from stolon lengths tolerated pre-emergence applications of linuron and methabenzthiazuron.

IT **1071-83-6**, Glyphosate. **64902-72-3**, Chlorsulfuron
106040-48-6, Tribenuron
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide tolerance of Dichondra micrantha)

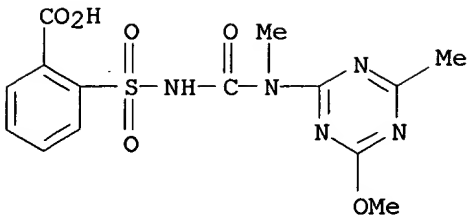
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



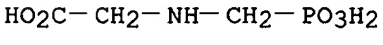
RN 106040-48-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



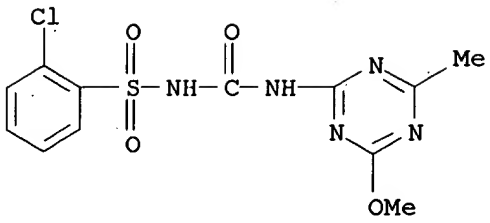
L39 ANSWER 9 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:678263 HCAPLUS
DOCUMENT NUMBER: 127:274136
TITLE: Wine grape (Vitis vinifera) response to fall exposure of simulated drift from selected herbicides
AUTHOR(S): Bhatti, Muhammad A.; Al-Khatib, Kassim; Parker, Robert
CORPORATE SOURCE: Food and Environmental Quality Laboratory, Washington State University, Richland, WA, 99352, USA
SOURCE: Weed Technology (**1997**), 11(3), 532-536
CODEN: WETEE9; ISSN: 0890-037X
PUBLISHER: Weed Science Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Grape response to fall application of herbicides applied at simulated drift rates was studied in 1992 and 1993. Chlorsulfuron, thifensulfuron, 2,4-D, glyphosate, bromoxynil, and 2,4-D plus glyphosate were applied at 1/100, 1/33, 1/10, and 1/3 of a selected max. rate for use in wheat or fallow. All herbicides, except bromoxynil and thifensufluron, caused symptoms on grape vines, at the highest rate during the spring following fall application. The most severe symptoms were caused by 2,4-D and 2,4-D plus glyphosate, whereas the least symptoms were caused by chlorsulfuron and glyphosate. The severity of symptoms increased and shoot growth, leaf area, internode length, and dry cane wt. decreased as the rates of 2,4-D and 2,4-D plus glyphosate increased. Chlorsulfuron and glyphosate reduced the growth of grape vines only when applied at the highest rate during the fall. Exposure of wine grapes to 2,4-D or 2,4-D plus glyphosate during the fall can adversely affect growth the following spring.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(grape response herbicide drift)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 10 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:594605 HCAPLUS
DOCUMENT NUMBER: 127:216385
TITLE: Synergistic herbicidal composition based on glyphosate esters
INVENTOR(S): Riebel, Hans-Jochem; Priesnitz, Uwe; Wieschollek, Raphael; Dollinger, Markus; Wetcholowsky, Ingo
PATENT ASSIGNEE(S): Bayer A.-G., Germany; Riebel, Hans-Jochem; Priesnitz, Uwe; Wieschollek, Raphael; Dollinger, Markus; Wetcholowsky, Ingo
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9731535	A1	19970904	WO 1997-EP732	19970217 <--
W: AU, BB, BG, BR, BY, CA, CN, CZ, HU, IL, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
DE 19607633	A1	19970904	DE 1996-19607633	19960229 <--
AU 9718737	A1	19970916	AU 1997-18737	19970217 <--

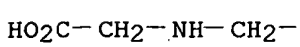
PRIORITY APPLN. INFO.: DE 1996-19607633 19960229
WO 1997-EP732 19970217

AB A synergistic combination of a glyphosate ester or acid adduct of an ester, and at least one compd. prior art herbicide, is given. The pure glyphosate ester or acid adduct of an ester is added to spray formulations of the 2nd herbicide.

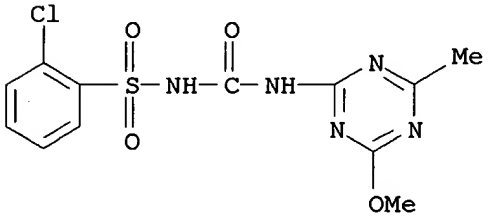
IT **1071-83-6D**, Glyphosate, esters, mixts. contg. **64902-72-3D**, Chlorsulfuron, mixts. with glyphosate esters **74222-97-2D**, Sulfometuron methyl, mixts. with glyphosate esters **74223-56-6D**, Sulfometuron, mixts. with glyphosate esters **74223-64-6D**, Metsulfuron methyl, mixts. with glyphosate esters **79510-48-8D**, Metsulfuron, mixts. with glyphosate esters **82097-50-5D**, Triasulfuron, mixts. with glyphosate esters **86209-51-0D**, Primisulfuron methyl, mixts. with glyphosate esters **90982-32-4D**, Chlorimuron ethyl, mixts. with glyphosate esters **94125-34-5D**, Prosulfuron, mixts. with glyphosate esters **99283-00-8D**, Chlorimuron, mixts. with glyphosate esters **101200-48-0D**, Tribenuron methyl, mixts. with glyphosate esters **106040-48-6D**, Tribenuron, mixts. with glyphosate esters **113036-87-6D**, Primisulfuron, mixts. with glyphosate esters

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal compns.)

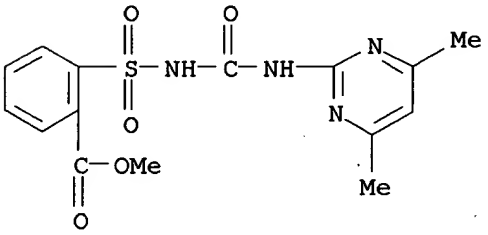
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



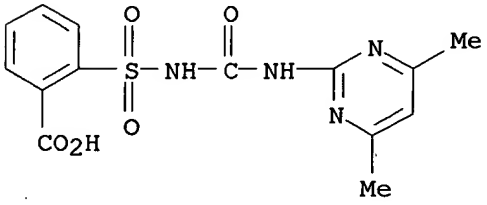
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



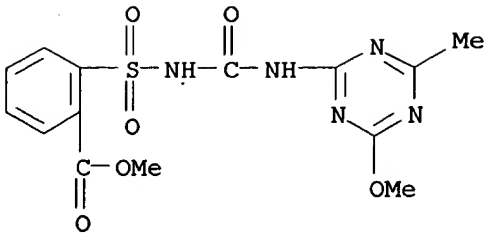
RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



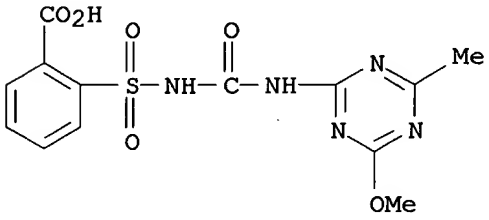
RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



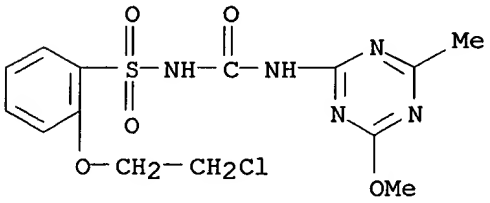
RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



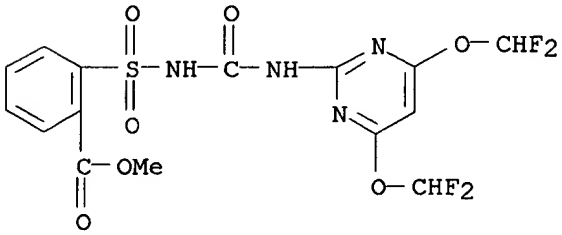
RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 82097-50-5 HCAPLUS
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

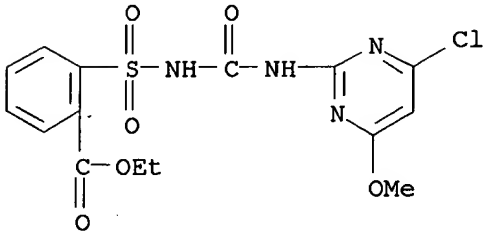


RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

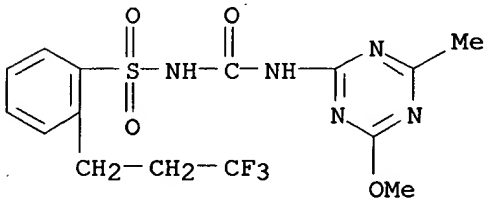


RN 90982-32-4 HCAPLUS

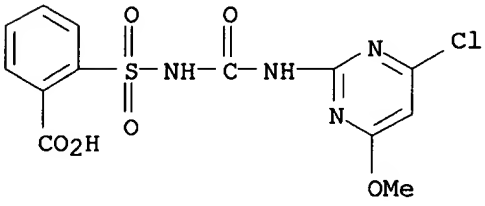
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



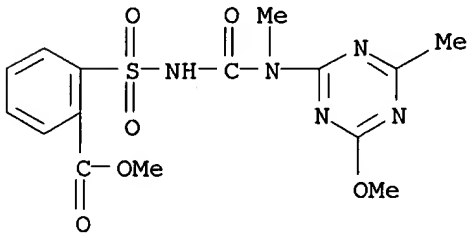
RN 94125-34-5 HCAPLUS
CN Benzenesulfonamide, N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]-2-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)



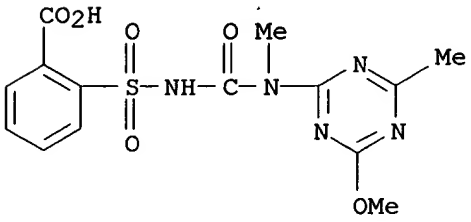
RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



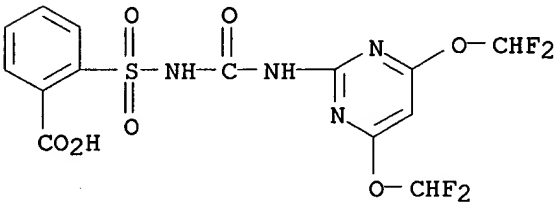
RN 101200-48-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 106040-48-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 113036-87-6 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



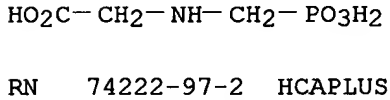
L39 ANSWER 11 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:387769 HCAPLUS
DOCUMENT NUMBER: 127:55380
TITLE: Herbicides-protecting long-term sustainability and water quality in forest ecosystems
AUTHOR(S): Neary, Daniel G.; Michael, Jerry L.
CORPORATE SOURCE: USDA Forest Service, Flagstaff, AZ, 86001, USA
SOURCE: New Zealand Journal of Forestry Science (**1996**), 26(1/2), 241-264
CODEN: NZFSAP; ISSN: 0048-0134
PUBLISHER: New Zealand Forest Research Institute
DOCUMENT TYPE: Journal
LANGUAGE: English

AB World-wide, sediment is the major water quality problem. The use of herbicides for controlling competing vegetation during stand establishment can be beneficial to forest ecosystem sustainability and water quality by minimizing off-site soil loss, reducing onsite soil and org. matter displacement, and preventing deterioration of soil phys. properties. Sediment losses from sites where competing vegetation is controlled by mech. methods can be 1-2 orders of magnitude greater than natural losses from undisturbed watersheds. On a watershed basis, vegetation management techniques in general increase annual erosion by <7%. Herbicides do not increase natural erosion rates. Org. matter and nutrients that are crit. to long-term site productivity can be removed off-site by mech. vegetation-management techniques and fire, or redistributed on-site in a manner that reduces availability to the next stand. For several decades, research has been conducted on the fate of forestry-use herbicides in

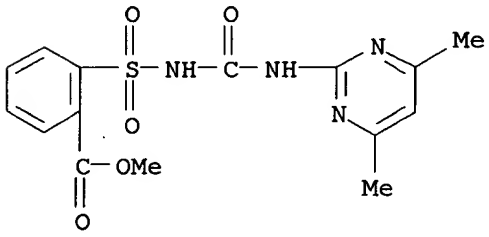
various watersheds throughout the southern and western US, Canada, and Australia. This research has evaluated chems. such as 2,4-D, glyphosate, hexazinone, imazapyr, metsulfuron Me, picloram, sulfometuron Me, tebuthiuron, and triclopyr. Losses in streamflow, and leaching to groundwater have been evaluated. Field study data indicate that residue concns. tend to be low, except where direct applications are made to ephemeral channels or streams, and do not persist for extended periods of time. Regional environmental impact statements in the US demonstrate that forestry herbicide presence in surface and groundwater is not a significant risk to water quality or human health. They also indicate that herbicides can greatly reduce water quality deterioration that is produced by erosion and sedimentation.

IT **1071-83-6,** Glyphosate **74222-97-2,** Sulfometuron methyl
74223-64-6, Metsulfuron methyl
RL: AGR (Agricultural use); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(herbicides-protecting long-term sustainability and water quality in forest ecosystems)

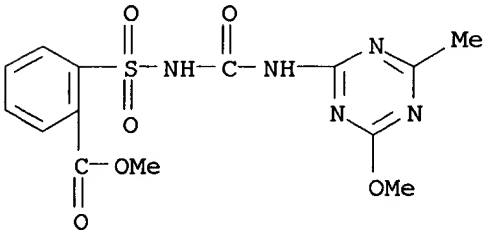
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



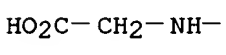
L39 ANSWER 12 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:283233 HCAPLUS
DOCUMENT NUMBER: 126:260411
TITLE: Herbicide strategies for reducing nutgrass (Cyperus rotundus L.) density in cotton (Gossypium hirsutum L.)
AUTHOR(S): Charles, G. W.
CORPORATE SOURCE: NSW Agriculture, Australian Cotton Research Institute, Narrabri, NSW 2390, Australia
SOURCE: Australian Journal of Experimental Agriculture (**1997**), 37(2), 231-241
CODEN: AJEAEL; ISSN: 0816-1089
PUBLISHER: CSIRO
DOCUMENT TYPE: Journal
LANGUAGE: English

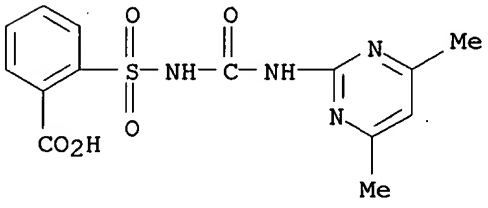
AB A range of herbicides and combinations of herbicides were evaluated for controlling nutgrass (Cyperus rotundus L.) in 5 expts. in irrigated cotton in northern New South Wales. Control was assessed by comparing the d. of tubers before and after treatment. Cotton lint yield and ginning percentage were also assessed. Combinations of herbicides, including 2,4-D, were evaluated in an addnl. expt. in fallow. Multiple in-crop applications of glyphosate reduced tuber d. by up to 96% over 2 seasons. This was improved with successive applications of glyphosate. Nutgrass tuber d. was also reduced when glyphosate was combined with norflurazon (96%), benfuresate (92%), fluometuron (84%) or EPTC (87%). Similar redns. in nutgrass d. were obsd. with methazole, dimethenamid, atrazine, and the combination of norflurazon + MSMA. Treatments which reduced nutgrass d. generally resulted in av. or above-av. lint yields. From these results, a strategy for controlling nutgrass in cotton can be developed using norflurazon preplanting, and multiple applications of glyphosate and/or MSMA in-crop.

IT **1071-83-6**, Glyphosate **74223-56-6**, Sulfometuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicides for controlling nutgrass d. in cotton)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



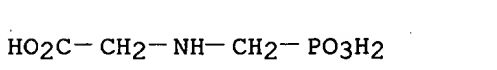
L39 ANSWER 13 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:109141 HCAPLUS
DOCUMENT NUMBER: 126:128220
TITLE: Mechanical and chemical control of cogongrass (Imperata cylindrica)
AUTHOR(S): Willard, Thomas R.; Shilling, Donn G.; Gaffney, James F.; Currey, Wayne L.
CORPORATE SOURCE: Amer. Agric., Inc., Cary, NC, USA
SOURCE: Weed Technology (**1996**), 10(4), 722-726
CODEN: WETEE9; ISSN: 0890-037X
PUBLISHER: Weed Science Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

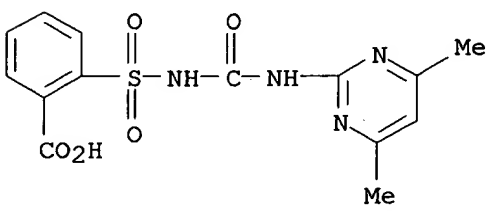
AB Field studies were initiated in 1985 and 1986 to evaluate the effects of dalapon, glyphosate, imazapyr, and sulfometuron applications to established cogongrass alone or in combination with either mowing or discing. Mowing and discing treatments were performed 4 mo before and 8 mo after the herbicide treatments in the 1985 expts. and 2 mo before and 7 mo after the herbicide treatment in the 1986 expts. When applied alone, glyphosate at 3.4 kg ai/ha and imazapyr at 0.8 kg ai/ha caused the greatest redn. in shoot and rhizome biomass about 2 yr after application. However, the rhizome infestation was reduced only 43% by glyphosate and 51% by imazapyr, as compared to the nontreated control. With no herbicide, two mowings or discings were generally more effective than a single mowing or discing treatment. The redn. in shoot and rhizome biomass for two mowings without herbicide was 65 and 38% and for two discings, 73 and 66%, resp. Acceptable (> 80%) levels of cogongrass control, based on redns. in rhizome biomass occurred only when applications of dalapon, glyphosate, or imazapyr were made in combination with two discings despite the fact that mowing before and after treatment reduced shoot biomass by at least 89%.

IT **1071-83-6**, Glyphosate **74223-56-6**, Sulfometuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(mech. and chem. control of cogongrass)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 14 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:102086 HCAPLUS
DOCUMENT NUMBER: 126:114642
TITLE: Herbicidal compositions containing DMSO
INVENTOR(S): Smale, Bernard
PATENT ASSIGNEE(S): Smale; Bernard, USA
SOURCE: U.S., 4 pp., Cont.-in-part of U.S. Ser. No. 300,267, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

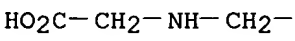
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5597778	A	19970128	US 1995-475987	19950607 <--
CA 2199028	AA	19960321	CA 1995-2199028	19950901 <--
WO 9608148	A2	19960321	WO 1995-US12410	19950901 <--
WO 9608148	A3	19960502		
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9538236	A1	19960329	AU 1995-38236	19950901 <--
AU 711633	B2	19991021		
CN 1156953	A	19970813	CN 1995-194874	19950901 <--
EP 804075	A2	19971105	EP 1995-936203	19950901 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 10505097	T2	19980519	JP 1995-510441	19950901
BR 9508668	A	20020618	BR 1995-8668	19950901
US 6133200	A	20001017	US 1999-298862	19990426

PRIORITY APPLN. INFO.:
US 1994-300267 B2 19940902
US 1995-475987 A 19950607
WO 1995-US12410 W 19950901
US 1997-788243 A2 19970127

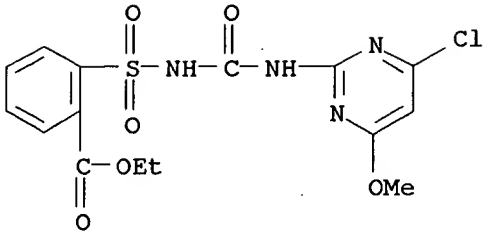
AB The addn. of DMSO to herbicidal compns. makes it possible to decrease the amt. of active herbicidal agent required for desired activity, without loss of effectiveness. The most preferred compns. contain 1-2.5% DMSO. However, in some instances, it may be advisable to use as much as 3% DMSO. The addn. of the DMSO also results in increased stability to the compn.

IT **1071-83-6**, Glyphosate **90982-32-4**, Classic
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicidal compns. contg. DMSO)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 15 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:38898 HCAPLUS
DOCUMENT NUMBER: 126:86106
TITLE: Synergistic herbicidal mixtures comprising 4-iodo-2-[3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)ureidosulfonyl]benzoic acid esters.
INVENTOR(S): Hacker, Erwin; Kehne, Heinz; Hes, Martin
PATENT ASSIGNEE(S): Hoechst Schering Agrevo Gmbh, Germany
SOURCE: Ger. Offen., 48 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19520839	A1	19961212	DE 1995-19520839	19950608 <--
CA 2222959	AA	19961227	CA 1996-2222959	19960605 <--
WO 9641537	A1	19961227	WO 1996-EP2443	19960605 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
AU 9662225	A1	19970109	AU 1996-62225	19960605 <--
AU 704539	B2	19990429		
EP 831707	A1	19980401	EP 1996-920794	19960605
EP 831707	B1	20010926		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE				
CN 1189763	A	19980805	CN 1996-195183	19960605
BR 9608673	A	19990706	BR 1996-8673	19960605
JP 11508243	T2	19990721	JP 1996-502588	19960605
AT 206007	E	20011015	AT 1996-920794	19960605
ES 2162076	T3	20011216	ES 1996-920794	19960605
US 5990047	A	19991123	US 1996-659721	19960606
IL 122238	A1	20010808	IL 1997-122238	19971119
BG 63656	B1	20020830	BG 1997-102104	19971204

PRIORITY APPLN. INFO.: DE 1995-19520839 A 19950608
WO 1996-EP2443 W 19960605
OTHER SOURCE(S): MARPAT 126:86106
AB Synergistic herbicide mixts. comprise a title compd. I (R1 = alkyl, alkenyl, alkynyl, haloalkyl, alkoxyalkyl) and .gtoreq.1 other herbicide, such as a herbicide selectively active against monocot and/or dicots in

cereals and/or corn, a nonselective herbicide in noncrops and/or a selective herbicide in transgenic cultures.

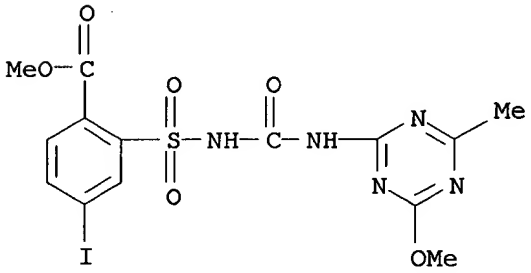
IT **185119-77-1 185119-78-2 185119-79-3**
185119-80-6 185119-81-7 185119-82-8
185119-83-9 185119-84-0 185119-85-1
185119-86-2 185119-87-3 185119-88-4
185119-89-5 185119-90-8 185119-91-9
185119-92-0 185119-93-1 185119-94-2
185140-01-6
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal mixt.)

RN 185119-77-1 HCAPLUS

CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with methyl 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoate (9CI) (CA INDEX NAME)

CM 1

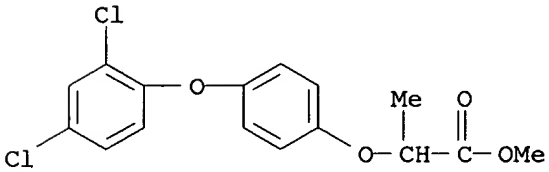
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

CRN 51338-27-3
CMF C16 H14 Cl2 O4



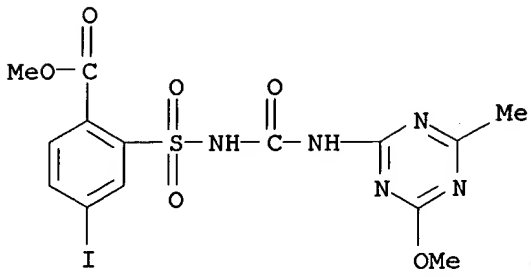
RN 185119-78-2 HCAPLUS

CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt.

with ethyl 2-[4-[(6-chloro-2-benzoxazolyl)oxy]phenoxy]propanoate (9CI) (CA INDEX NAME)

CM 1

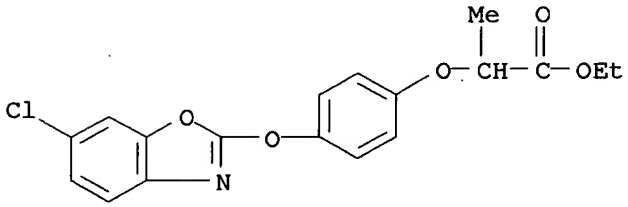
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

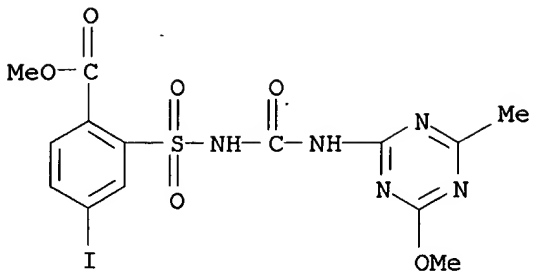
CRN 66441-23-4
CMF C18 H16 Cl N O5



RN 185119-79-3 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with (R)-2-propynyl 2-[4-[(5-chloro-3-fluoro-2-pyridinyl)oxy]phenoxy]propanoate (9CI) (CA INDEX NAME)

CM 1

CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na

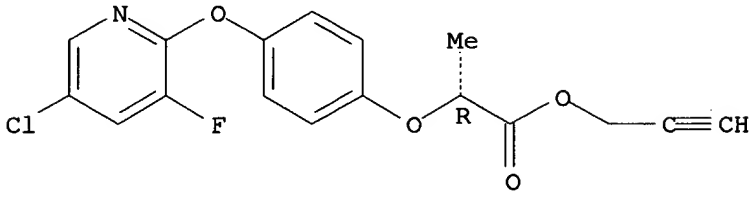


● Na

CM 2

CRN 105512-06-9
CMF C17 H13 Cl F N O4

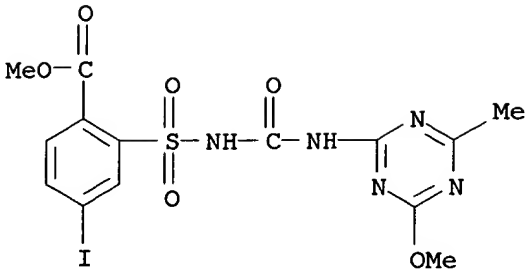
Absolute stereochemistry.



RN 185119-80-6 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with N,N-dimethyl-N'-[4-(1-methylethyl)phenyl]urea (9CI) (CA INDEX NAME)

CM 1

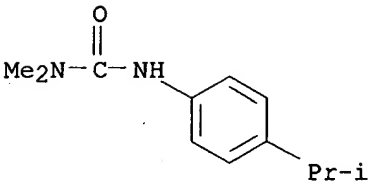
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

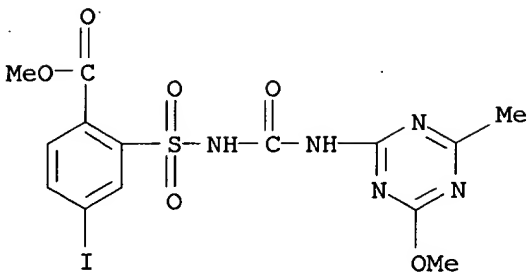
CRN 34123-59-6
CMF C12 H18 N2 O



RN 185119-81-7 HCAPLUS
CN Benzoic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-4(or 5)-methyl-, methyl ester, mixt. with methyl 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate monosodium salt (9CI) (CA INDEX NAME)

CM 1

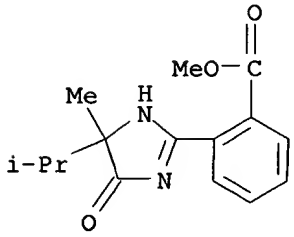
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

CRN 81405-85-8
CMF C16 H20 N2 O3
CCI IDS

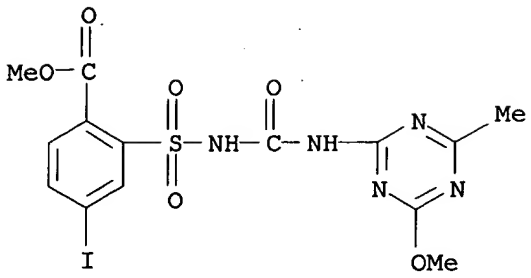


D1—Me

RN 185119-82-8 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with 2-[[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-N,N-dimethyl-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

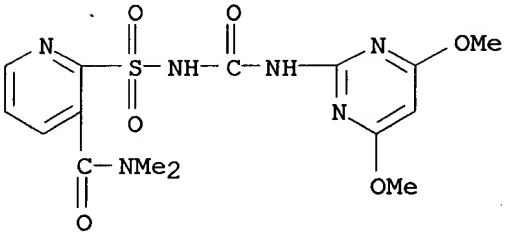
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

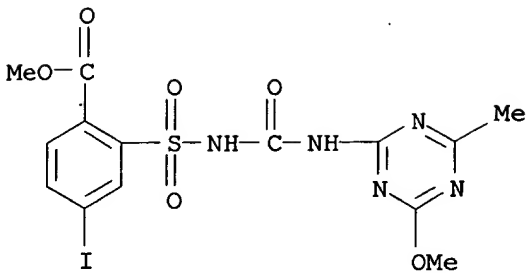
CRN 111991-09-4
CMF C15 H18 N6 O6 S



RN 185119-83-9 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with N-[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]-3-(ethylsulfonyl)-2-pyridinesulfonamide (9CI) (CA INDEX NAME)

CM 1

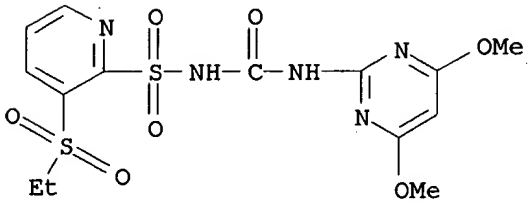
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

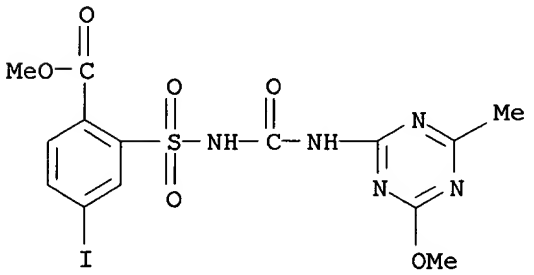
CRN 122931-48-0
CMF C14 H17 N5 O7 S2



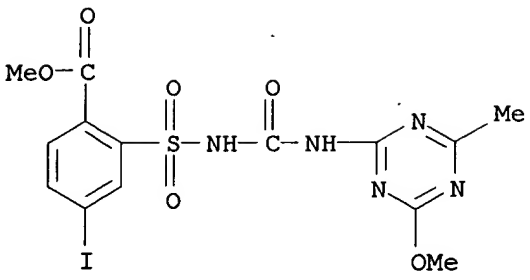
RN 185119-84-0 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with sodium (4-chloro-2-methylphenoxy)acetate (9CI) (CA INDEX NAME)

CM 1

CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



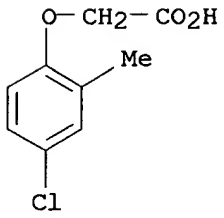
Na



● Na

CM 2

CRN 3653-48-3
CMF C9 H9 Cl O3 . Na

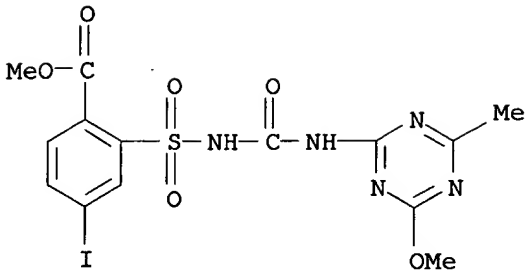


● Na

RN 185119-85-1 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with (R)-2-(4-chloro-2-methylphenoxy)propanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na

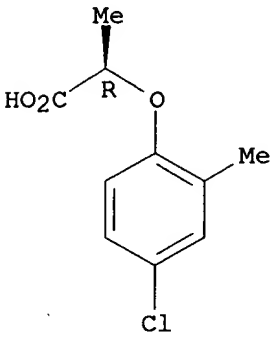


● Na

CM 2

CRN 16484-77-8
CMF C10 H11 Cl O3

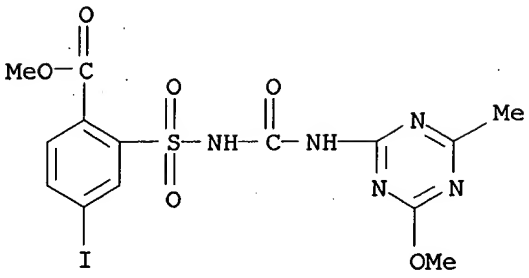
Absolute stereochemistry. Rotation (+).



RN 185119-86-2 HCAPLUS
CN Benzoic acid, 3,6-dichloro-2-methoxy-, mixt. with methyl 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate monosodium salt (9CI) (CA INDEX NAME)

CM 1

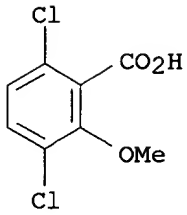
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

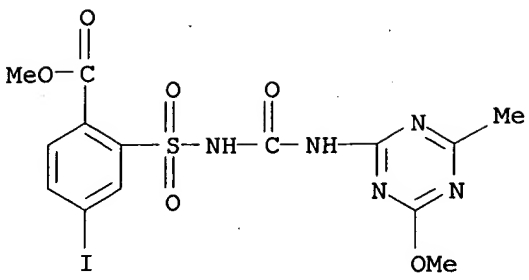
CRN 1918-00-9
CMF C8 H6 Cl2 O3



RN 185119-87-3 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with 1-methylheptyl [(4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy]acetate (9CI) (CA INDEX NAME)

CM 1

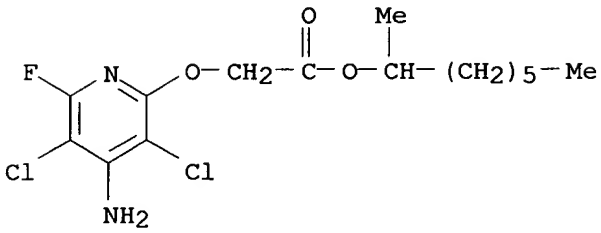
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

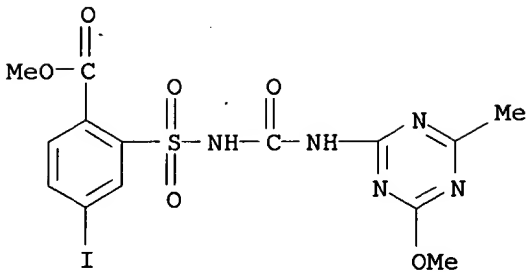
CRN 81406-37-3
CMF C15 H21 Cl2 F N2 O3



RN 185119-88-4 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with 4-hydroxy-3,5-diiodobenzonitrile (9CI) (CA INDEX NAME)

CM 1

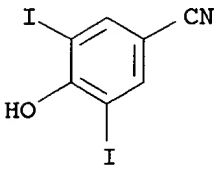
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

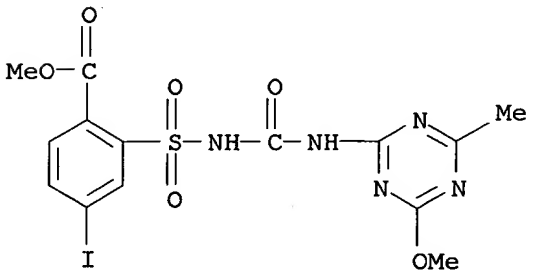
CRN 1689-83-4
CMF C7 H3 I2 N O



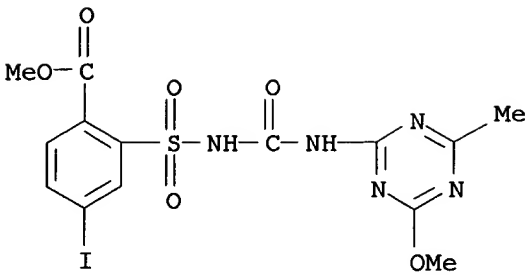
RN 185119-89-5 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with 2-ethoxy-2-oxoethyl 5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrobenzoate (9CI) (CA INDEX NAME)

CM 1

CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



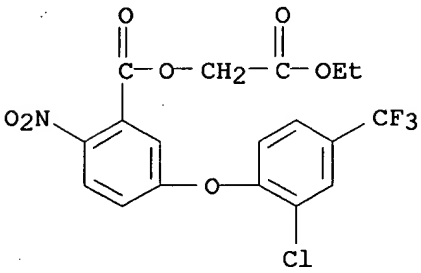
Na



● Na

CM 2

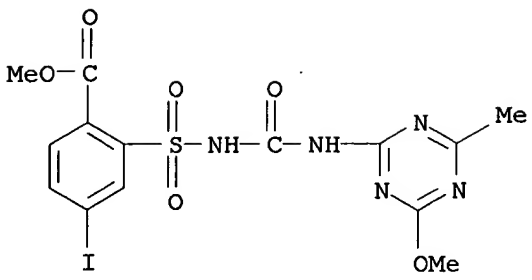
CRN 77501-90-7
CMF C18 H13 Cl F3 N O7



RN 185119-90-8 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

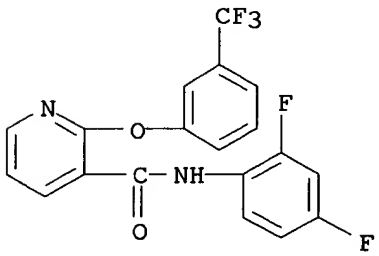
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

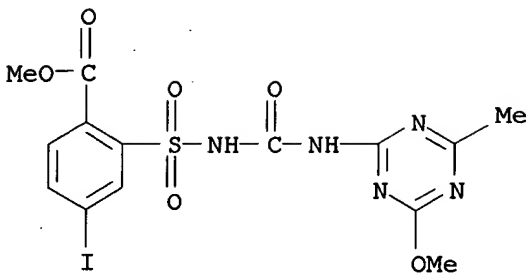
CRN 83164-33-4
CMF C19 H11 F5 N2 O2



RN 185119-91-9 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with 6-chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

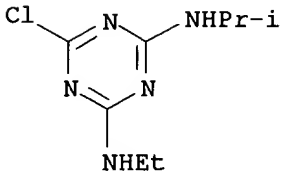
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

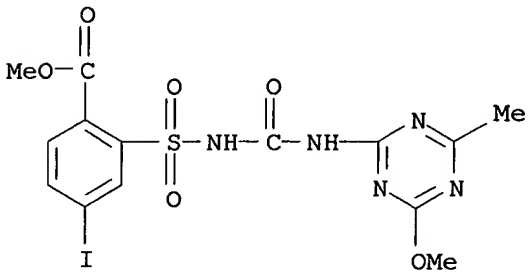
CRN 1912-24-9
CMF C8 H14 Cl N5



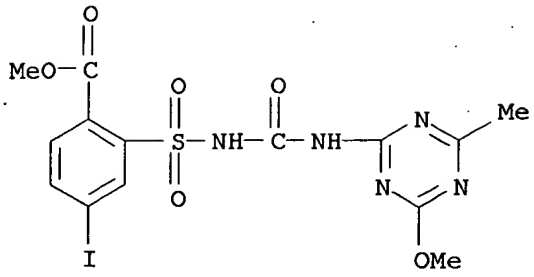
RN 185119-92-0 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



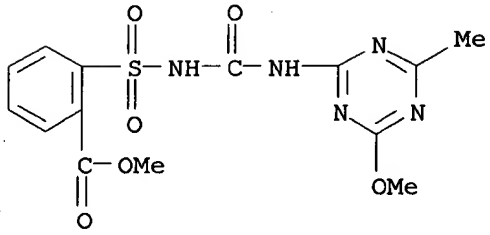
Na



● Na

CM 2

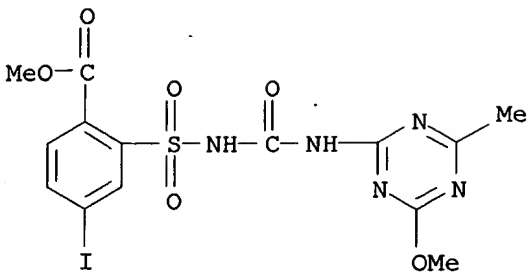
CRN 74223-64-6
CMF C14 H15 N5 O6 S



RN 185119-93-1 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with N-(4,6-dimethoxy-2-pyrimidinyl)-3-methyl-2,4-dithia-3,5-diazahexan-6-amide 2,2,4,4-tetraoxide (9CI) (CA INDEX NAME)

CM 1

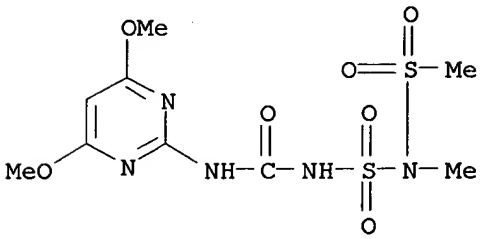
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

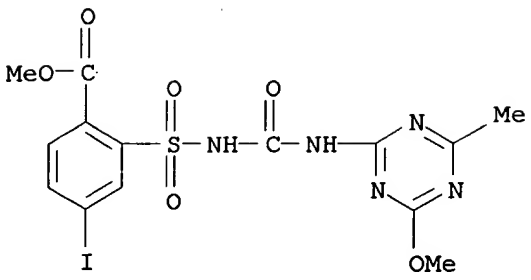
CRN 120923-37-7
CMF C9 H15 N5 O7 S2



RN 185119-94-2 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with 2-amino-4-(hydroxymethylphosphinyl)butanoic acid monoammonium salt (9CI) (CA INDEX NAME)

CM 1

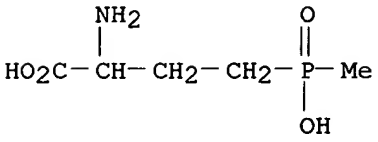
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

CRN 77182-82-2
CMF C5 H12 N O4 P . H3 N

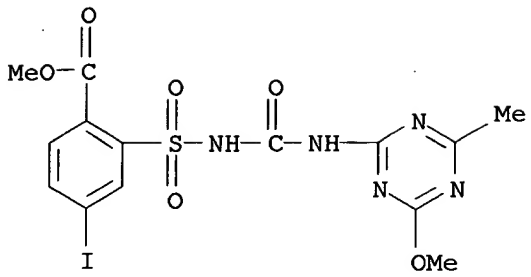


● NH_3

RN 185140-01-6 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, monosodium salt, mixt. with methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate (9CI) (CA INDEX NAME)

CM 1

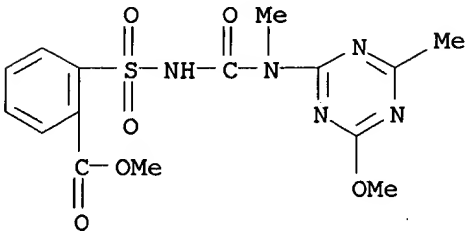
CRN 144550-36-7
CMF C14 H14 I N5 O6 S . Na



● Na

CM 2

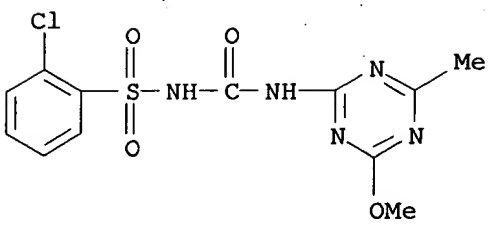
CRN 101200-48-0
CMF C15 H17 N5 O6 S



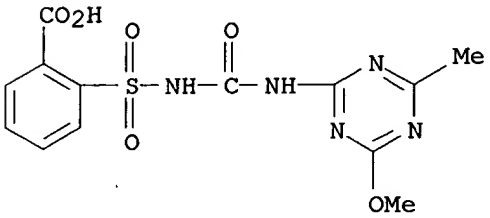
IT **1071-83-6D**, Glyphosate, mixts. with iodo(methoxymethyltriazinyl)ur eidosulfonyl]benzoates **64902-72-3D**, Chlorsulfuron, mixts. with iodo(methoxymethyltriazinyl)ureidosulfonyl]benzoates **79510-48-8D** , Metsulfuron, mixts. with iodo(methoxymethyltriazinyl)ureidosulfonyl]benz oates **82097-50-5D**, Triasulfuron, mixts. with iodo(methoxymethyltriazinyl)ureidosulfonyl]benzoates **94125-34-5D** , Prosulfuron, mixts. with iodo(methoxymethyltriazinyl)ureidosulfonyl]benz oates **106040-48-6D**, Tribenuron, mixts. with iodo(methoxymethyltriazinyl)ureidosulfonyl]benzoates **113036-87-6D** , Primisulfuron, mixts. with iodo(methoxymethyltriazinyl)ureidosulfonyl]be nzoates **185119-76-0D**, esters, mixts. contg.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal mixts.)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

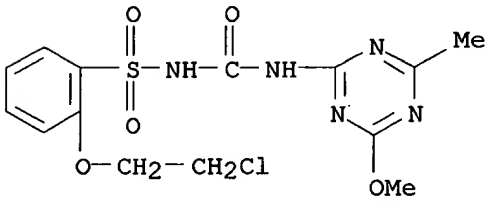
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



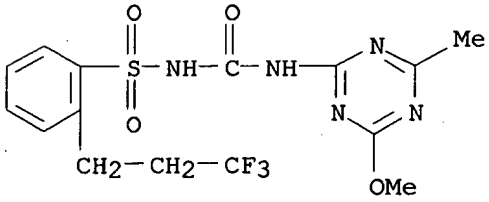
RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



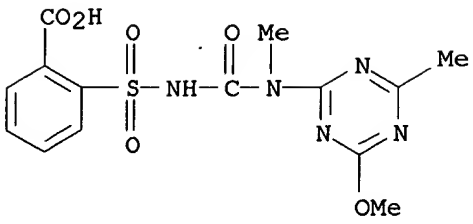
RN 82097-50-5 HCAPLUS
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



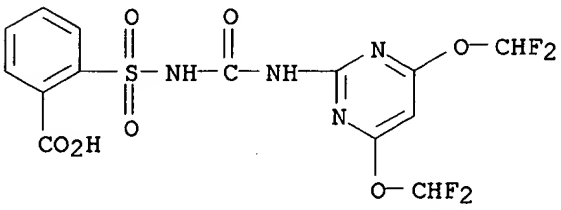
RN 94125-34-5 HCAPLUS
CN Benzenesulfonamide, N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]-2-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)



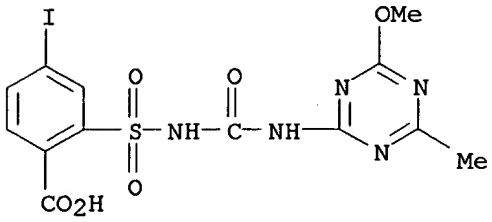
RN 106040-48-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 113036-87-6 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 185119-76-0 HCAPLUS
CN Benzoic acid, 4-iodo-2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 16 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:719812 HCAPLUS
DOCUMENT NUMBER: 126:3021
TITLE: Growth responses following herbicide release of loblolly pine from competing hardwoods in the Virginia Piedmont
AUTHOR(S): Quicke, Harold E.; Lauer, Dwight K.; Glover, Glenn R.
CORPORATE SOURCE: School Forestry and Alabama Agricultural Experiment Station, Auburn University, Auburn University, AL, 36849-5418, USA
SOURCE: Southern Journal of Applied Forestry (**1996**), 20(4), 177-181
CODEN: SJAFD9; ISSN: 0148-4419
PUBLISHER: Society of American Foresters
DOCUMENT TYPE: Journal

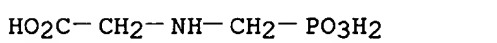
LANGUAGE: English

AB Effective herbicide treatments for the release of loblolly pine (Pinus taeda L.) from competing hardwoods 7 yr after treatment were evaluated. The study site was a hardwood-to-pine conversion area that had been chopped and burned. Treatments included two groups of herbicides: (1) imazapyr at 1.0 lb/ac used alone or in combination with metsulfuron or glyphosate, and (2) glyphosate at 1.5 lb/lac used alone or in combination with metsulfuron. Broadcast herbicide treatments were applied in Sept., 1985, during the second growing season. All treatments were effective in controlling hardwoods, with the least effective treatment decreasing hardwood basal area by 55% relative to the untreated check. The pine crop trees responded with increased diam., height, basal area, and vol. The increase in total pine vol. outside bark over the untreated check ranged from 163 to 640 ft3/ac (22% to 85%) and the increase in pine basal area ranged from 13 to 40 ft2/ac (27% to 83%). No treatment resulted in significant pine mortality. Although pine height growth was stunted the year following treatment, at age 9, mean height gains on treated plots ranged from 2.7 ft to 5.6 ft. Treatments contg. imazapyr performed better than treatments with glyphosate alone or in combination with metsulfuron. Imazapyr at 1.0 lb/ac reduced hardwood basal area to 2 ft2/ac at age nine compared to 25 ft2/ac on the untreated check plots. There was, therefore, little room for improvement from additives, indicating that combinations with lower rates of imazapyr, comparable to today's operational rates, may be more appropriate.

IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
131755-59-4, Glyphosate-metsulfuron mixt. **184170-62-5**, Imazapyr-metsulfuron mixt.
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(growth responses following herbicide release of loblolly pine from competing hardwoods in Virginia Piedmont)

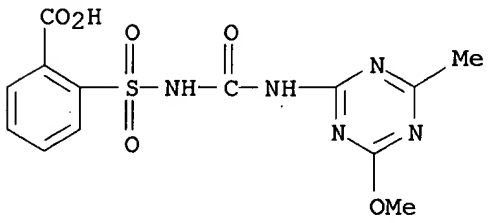
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS

CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



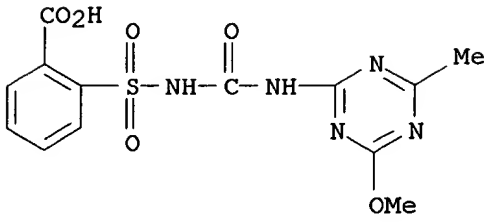
RN 131755-59-4 HCAPLUS

CN Glycine, N-(phosphonomethyl)-, mixt. with 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX

NAME)

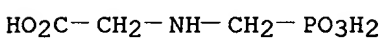
CM 1

CRN 79510-48-8
CMF C13 H13 N5 O6 S



CM 2

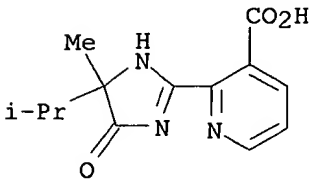
CRN 1071-83-6
CMF C3 H8 N O5 P



RN 184170-62-5 HCAPLUS
CN 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-, mixt. with 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

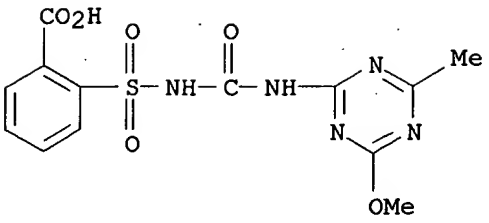
CM 1

CRN 81334-34-1
CMF C13 H15 N3 O3



CM 2

CRN 79510-48-8
CMF C13 H13 N5 O6 S

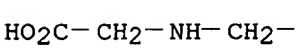


L39 ANSWER 17 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:628023 HCAPLUS
DOCUMENT NUMBER: 125:295166
TITLE: Dry concentrate (DC) spray adjuvants
AUTHOR(S): Underwood, Allen K.; Clark, Anthony; Mack, Robert E.; Thomas, James; Roberts, Johnnie R.; Volgas, Greg C.
CORPORATE SOURCE: Helena Chemical Company, Memphis, TN, USA
SOURCE: FRI Bulletin (**1996**), Volume Date 1995, 193(Proceedings of the Fourth International Symposium on Adjuvants for Agrochemicals, 1995), 391-396
CODEN: FRIBEJ; ISSN: 0111-8129
PUBLISHER: New Zealand Forest Research Institute
DOCUMENT TYPE: Journal
LANGUAGE: English

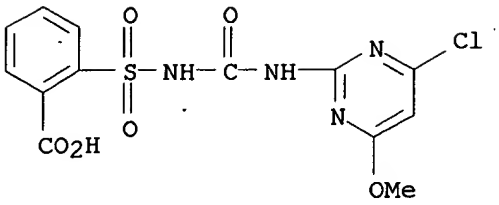
AB The effectiveness of four dry conc. (DC) adjuvants was examd. Cohort DC (org. nonionic surfactant) and Kinetic DC (silicone-based nonionic surfactant) were as effective or more effective than conventional liq. formulation surfactants. NXS DC buffering agent was more effective at maintaining spray soln. pH than the liq. buffering agent Buffer P.S. Drop Zone DC drift retardant was not affected by shearing forces which reduced the effectiveness of the polyacrylamide-based drift retardant Nalcotrol II. Glyphosate efficacy was not reduced when Drop Zone DC was added to the spray soln. Drop Zone DC also improved the washoff resistance of the fungicide chlorothalonil.

IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(dry conc. spray adjuvants for herbicides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 18 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:627999 HCAPLUS
DOCUMENT NUMBER: 125:268092
TITLE: Effect of organosilicone surfactants on the foliar uptake of herbicides: Stomatal infiltration versus cuticular penetration
AUTHOR(S): Gaskin, Robyn E.
CORPORATE SOURCE: NZ Forest Research Institute, Rotorua, N. Z.
SOURCE: FRI Bulletin (**1996**), Volume Date 1995, 193(Proceedings of the Fourth International Symposium on Adjuvants for Agrochemicals, 1995), 243-248
CODEN: FRIBEJ; ISSN: 0111-8129
PUBLISHER: New Zealand Forest Research Institute
DOCUMENT TYPE: Journal
LANGUAGE: English

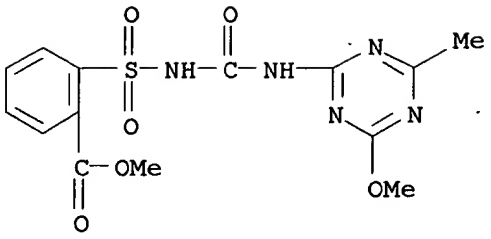
AB Effects of four organosilicone surfactants (0.2% w/v) on the foliar uptake of the herbicides, glyphosate, metsulfuron Me and haloxyfop ethoxyethyl, into field bean and wheat were investigated to det. the relative contributions of stomatal infiltration and cuticular penetration. Surfactant-induced uptake of all three herbicides into field bean was mainly via stomatal infiltration. Cuticular penetration was substantially enhanced by only one surfactant, and this occurred in the absence of any uptake via stomata. In contrast, stomatal infiltration was rarely obsd. in wheat and, organosilicone surfactants could substantially enhance, reduce, or have no effect on the cuticular penetration of herbicides in this species. Organosilicone surfactants promoted uptake of hydrophilic and lipophilic herbicides into foliage via both stomatal and cuticular pathways. Their effects were dependent on herbicide, plant species and surfactant structure.

IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron methyl
RL: AGR (Agricultural use); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(effect of organosilicone surfactants on foliar uptake of herbicides through stomatal infiltration vs. cuticular penetration)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 19 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:596155 HCAPLUS
DOCUMENT NUMBER: 125:214820
TITLE: Pesticidal granules containing fertilizer and surfactant
INVENTOR(S): Hazen, James Lyle
PATENT ASSIGNEE(S): Rhone-Poulenc Inc., USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9623408	A1	19960808	WO 1996-US1233	19960131 <--
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2211996	AA	19960808	CA 1996-2211996	19960131 <--
AU 9647728	A1	19960821	AU 1996-47728	19960131 <--
EP 806893	A1	19971119	EP 1996-903745	19960131 <--
R: AT, BE, DE, DK, ES, FR, GB, IT, SE, PT				
JP 10513148	T2	19981215	JP 1996-523671	19960131
BR 9607573	A	20001031	BR 1996-7573	19960131

PRIORITY APPLN. INFO.: US 1995-381599 A 19950131
WO 1996-US1233 W 19960131

OTHER SOURCE(S): MARPAT 125:214820

AB A method for producing a dry bonded pesticidal granular surfactant/fertilizer delivery system comprising spray-coating from about 1-99 wt. % dry water-sol., nitrogen-contg. fertilizer particles, preferably diammonium sulfate with the surfactant compn., admixing pesticide; and granulating the final delivery system; and the granules produced thereby. An adjuvant was prepd. by blending diammonium sulfate with a solid nonionic surfactant compn. contg. 85:15 Igepal DM 970-Igepal DA 530 (AgRHo DS 420). Glyphosate compns. with enhanced herbicidal activity were prepd. contg. this adjuvant.

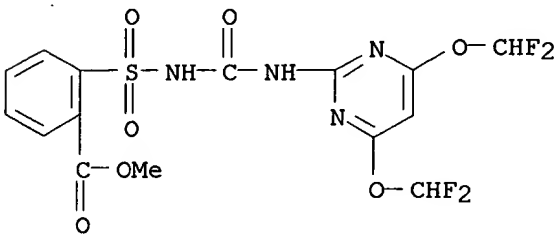
IT **1071-83-6**, Glyphosate **86209-51-0**, Beacon
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicidal granules contg. fertilizer and surfactant)

RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 20 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:593979 HCAPLUS
DOCUMENT NUMBER: 125:214823
TITLE: Herbicidal composition and method of controlling weeds
INVENTOR(S): Hudetz, Manfred; Gutbrod, Karl
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

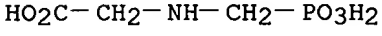
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9625043	A1	19960822	WO 1996-EP398	19960131	<--
W: AL, AM, AU, BB, BG, BR, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KP, KR, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AZ, BY, KG, KZ, RU, TJ, TM					
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
CA 2211971	AA	19960822	CA 1996-2211971	19960131	<--
AU 9646648	A1	19960904	AU 1996-46648	19960131	<--
EP 809436	A1	19971203	EP 1996-902262	19960131	<--
EP 809436	B1	20000301			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE					
BR 9606948	A	19971223	BR 1996-6948	19960131	<--
AT 189946	E	20000315	AT 1996-902262	19960131	
ZA 9601106	A	19960813	ZA 1996-1106	19960212	<--
US 5962371	A	19991005	US 1997-894177	19971212	

PRIORITY APPLN. INFO.: CH 1995-421 19950213
WO 1996-EP398 19960131
OTHER SOURCE(S): MARPAT 125:214823

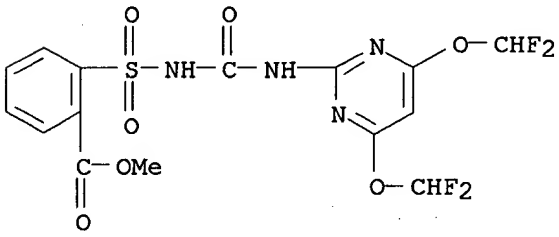
AB A herbicidal compn. comprising at least one compd. of formula (I), wherein R1 is (a), -CO2CH3 or -CH2CH2CF3, R2 is Me, methoxy or -OCHF2, R3 is Me or -OCHF2 and E is =CH- or =N-, with E being =N- when R2 is methoxy, or an agrochem. acceptable salt of at least one of I compds. , and a compd. of formula [MeP(O)(OH)CH2CH2CH(NH2)CO2H] and/or of formula [HOP(O)(OH)CH2NHCH2CO2H].

IT **1071-83-6 86209-51-0 94125-34-5 144651-06-9**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal compn. contg.)

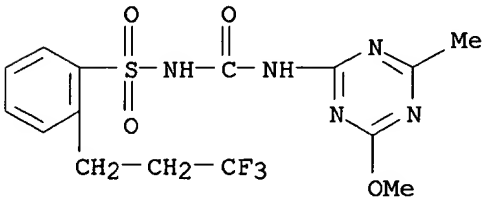
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



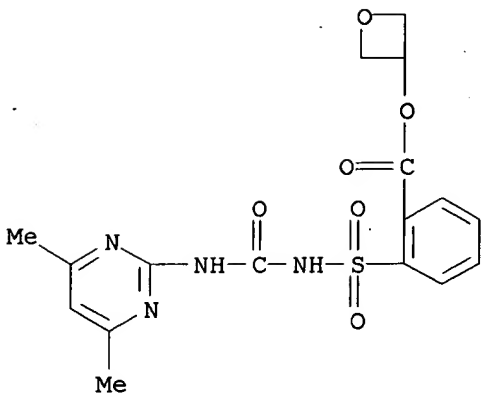
RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 94125-34-5 HCAPLUS
CN Benzenesulfonamide, N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]-2-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)



RN 144651-06-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, 3-oxetanyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 21 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:547442 HCAPLUS
DOCUMENT NUMBER: 125:188007
TITLE: Potential impact of low levels of chlorsulfuron and other herbicides on growth and yield of nontarget plants
AUTHOR(S): Fletcher, John S.; Pfleeger, Thomas G.; Ratsche, C.; Hayes, Robert
CORPORATE SOURCE: Dep. Botany Micobiol., Univ. Oklahoma, Norman, OK, 73019, USA
SOURCE: Environmental Toxicology and Chemistry (**1996**), 15(7), 1189-1196
CODEN: ETOCDK; ISSN: 0730-7268
PUBLISHER: SETAC Press
DOCUMENT TYPE: Journal
LANGUAGE: English

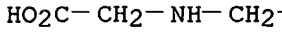
AB The influence of low application rates of chlorsulfuron on the growth and reprodn. of four taxonomically diverse plant species (canola, smartweed, soybean, and sunflower) were examd. Exposures examd. ranged from 1.times.10-3 to 8.times.10-3 of the recommended field rates for cereal crops and were approx. 1000 times less than the highest exposure recommended by the U. S. Environmental Protection Agency. Each species received a single application at one of three different stages of reproductive development. Effects were detd. by measuring the height and yield of mature plants. The comparative effects of four different herbicides (atrazine, chlorsulfuron, glyphosate, and 2,4-D) were detd. in the same manner by exposing each test species to a single low dose at one of three crit. stages of reproductive development. Chlorsulfuron reduced the yield of all plants tested, with the amt. of redn. depending on the time and rate of application. Most noteworthy was its influence on canola and soybean, in which at crit. stages in development, applications of 9.2 .times. 10-5 and 1.8 .times. 10-4 kg/ha, resp., reduced seed yields (dry wt.) to 8 and 1% of those controls without causing a significant change in vegetative growth. These low application rates are within the range of reported herbicide drift levels and suggest that chlorsulfuron may cause severe redn. in the yields of some nontarget crops if they are subjected to exposure at crit. stages of development. Application of other herbicides at comparable rates and stages of plant development had no influence on either canola or soybean.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (chlorsulfuron and other herbicides effect on growth and yield of nontarget plants)

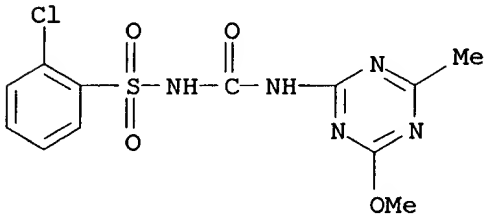
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 22 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:473684 HCAPLUS

DOCUMENT NUMBER: 125:135125

TITLE: Development and application of a simple procedure for toxicity testing using immobilized algae

AUTHOR(S): Abdel-Hamid, Mohammad I.

CORPORATE SOURCE: Faculty Science, University Mansoura, Egypt

SOURCE: Water Science and Technology (**1996**), 33(6, Hazard Assessment and Control of Environmental Contaminants in Water), 129-138
CODEN: WSTED4; ISSN: 0273-1223

PUBLISHER: Elsevier

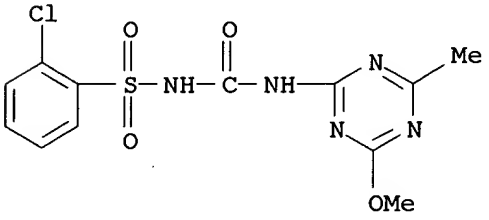
DOCUMENT TYPE: Journal

LANGUAGE: English

AB A simple microplate technique was adopted for toxicity assessment of a no. of pesticides including 6 herbicides (atrazine, dichloroprop, glyphosphate, chlorsulfuron, MCPA, and simazine), an insecticide (dimethoate), and a fungicide (propiconazole). Growth response of free and immobilized cultures of the green chlorococcal algae Selenastrum capricornutum to different treatments of these pesticides was tested and compared. The biotests were carried out under conditions optimal for the growth of the test alga. Algal growth was exposed in terms of dry wt., and was employed as the toxicity-response parameter. Dose-response curves were used to calc. the toxicity of the tested compds. in terms of EC50. Based on EC50 values, the responses of both immobilized and free cultures were quite similar for almost all the treatments. The technique facilitated the visual detection of the lowest toxic concn. giving no detectable algal growth (EC100). The technique is quite simple, rapid, practical, accurate, and space saving. It suggested that batteries of immobilized algae could replace free cultures in studies of toxicity testing.

IT **1071-83-6 64902-72-3**, Chlorsulfuron
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(development and application of simple procedure for testing of pesticide toxicity using immobilized algae)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 23 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:447072 HCAPLUS
DOCUMENT NUMBER: 125:107780
TITLE: Sprayable agricultural compositions
INVENTOR(S): Chamberlain, Peter
PATENT ASSIGNEE(S): Allied Colloids Ltd., UK
SOURCE: U.S., 15 pp., Cont.-in-part of U.S. Ser. No. 927,411, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5529975	A	19960625	US 1994-301629	19940907 <--
US 5525575	A	19960611	US 1993-65047	19930524 <--

PRIORITY APPLN. INFO.:

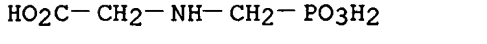
GB 1990-6676	A	19900326
GB 1991-6409	A	19910326
US 1992-857258	B1	19920325
US 1992-927411	B2	19921023
US 1993-65047	A2	19930524

AB The systemic activity of herbicides in sprayed foliar systemic compns. is improved by incorporating water sol. polyacrylamide in the sprayed compn. The polyacrylamide can have a mol. wt. sufficiently low that its presence does not substantially affect the spray pattern of the compn., and the polyacrylamide can have low soln. viscosity such that a convenient conc. can comprise an aq. soln. of the active ingredient and the polymer. Alternatively, the polymer can be supplied as a powder or as a reverse

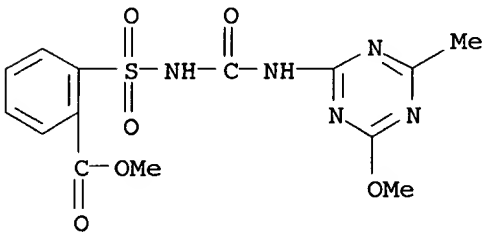
phase emulsion or dispersion. The sprayable compn. is preferably formulated such that the spray droplets have a small particle size. Thus, glyphosate dispersions contg. nonionic polyacrylamide had enhanced activity than dispersions contg. no polymer.

IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron-methyl
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(sprayable agricultural compns. contg. polyacrylamides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



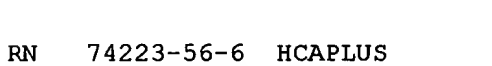
L39 ANSWER 24 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:432689 HCAPLUS
DOCUMENT NUMBER: 125:79301
TITLE: Imidazolinone herbicides improve restoration of great plains grasslands
AUTHOR(S): Masters, Robert A.; Nissen, Scott I.; Gaussoin, Roch E.; Beran, Daniel D.; Stougaard, Robert N.
CORPORATE SOURCE: Agric. Res. Div., Univ. Nebraska, Lincoln, NE, USA
SOURCE: Weed Technology (**1996**), 10(2), 392-403
CODEN: WETEE9; ISSN: 0890-037X
PUBLISHER: Weed Science Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The productivity and native species diversity of Great Plains grasslands have been substantially reduced by past management that facilitated the establishment of invasive exotic weeds and displacement of native species. Management strategies are needed to rapidly restore the productive capacity and biol. diversity of these degraded grasslands. Critically important phases of the grassland restoration process are the reintroduction and establishment of native species. Weed interference is the primary constraint to successful establishment of native plants. Strategies were developed that use multiple technologies, including herbicides, to expedite grassland revegetation with native grasses and forbs. Imidazolinone herbicides (AC 263,333, imazapyr, and imazethapyr) were used successfully to improve establishment of native perennial grasses (big bluestem, switchgrass, little bluestem) and selected forbs

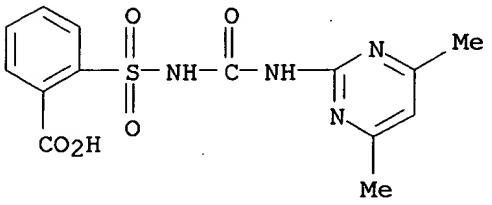
(blackeyed susan, purple prairieclover, Illinois bundleflower, trailing crownvetch, and upright prairie coneflower) on cropland and as components of a strategy to revegetate leafy spurge-infested rangeland with native tallgrasses. Imazethapyr at 70 or 110 g/ha applied at planting resulted in stands of big bluestem and little bluestem that were similar or superior to stands established where atrazine was applied. Seedling grasses were susceptible to imazapyr at two of three study sites. Imazapyr at 560 g/ha plus sulfometuron at 100 g/ha applied in fall was the optimum treatment for suppression of leafy spurge and exotic cool-season grasses and establishment of big bluestem and switchgrass on degraded rangeland sites. Establishment of selected forbs was improved by PRE treatment with AC 263,222 or imazethapyr at 70 g/ha. Thus, imidazolinone herbicides can be important components of integrated weed management strategies designed to reverse deterioration of grasslands by reestablishing native species, improving grassland productivity, and decreasing the prevalence of exotic weeds.

IT **1071-83-6**, Glyphosate **74223-56-6**, Sulfometuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(imidazolinone herbicides effect on restoration of great plains grasslands)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 25 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:429395 HCAPLUS
DOCUMENT NUMBER: 125:79387
TITLE: 1-Octanol/water partition coefficient (Kow) and pKa for ionizable pesticides measured by a pH-metric method
AUTHOR(S): Chamberlain, Keith; Evans, Avis A.; Bromilow, Richard H.
CORPORATE SOURCE: IACR-Rothamsted, Harpenden, Herts., AL5 2JQ, UK
SOURCE: Pesticide Science (**1996**), 47(3), 265-271
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: Wiley
DOCUMENT TYPE: Journal

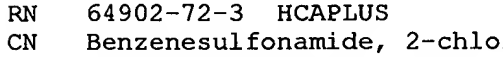
LANGUAGE: English

AB PKa values for a wide range of commonly used ionizable pesticides, together with the log Kow values of the most lipophilic form of each, have been measured using pH-metric techniques. Examples of acids, bases and multiprotic compds. from the major classes of herbicides, and a no. of insecticides and fungicides that contain ionizable groups, are included. The pKa and log Kow values so obtained were generally in good agreement with values taken from the literature that were measured by other methods. The lower limit of log Kow that could be measured by the pH-metric method lay below the -0.97 obtained for amitrole, but the method could not be applied to glyphosate for which shake-flask measurements indicated log Kow below -3. The highest log Kow obtained in this study was 5.12 for pentachlorophenol. The pH-metric technique offers a rapid and convenient method to det. pKa and log Kow for ionizable compds., esp. when utilizing an automatic titrn. system linked to a dedicated computer.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **74223-64-6**, Metsulfuron methyl
RL: AGR (Agricultural use); PRP (Properties); BIOL (Biological study); USES (Uses)
(octanol/water partition coeff. and pKa for ionizable pesticides measured by a pH-metric method)

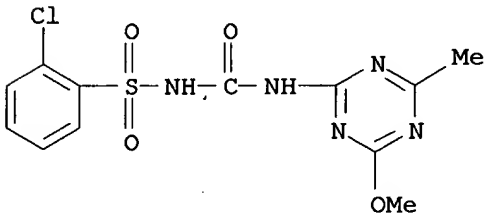
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



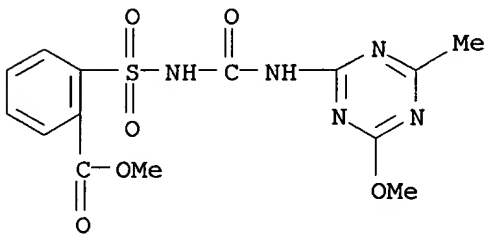
RN 64902-72-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS

CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 26 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:411053 HCAPLUS
DOCUMENT NUMBER: 125:79424
TITLE: Seed hull extract assimilation agents for agrochemical compositions
INVENTOR(S): Medina-Vega, Luis R.; Hickey, Joseph A.; Dillon, Lewis E.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 11 pp., Cont.-in-part of U.S. 5,352,264.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

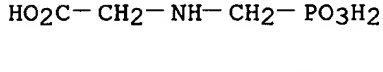
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5525576	A	19960611	US 1994-312990	19941003 <--
US 5352264	A	19941004	US 1991-775460	19911015 <--

PRIORITY APPLN. INFO.: US 1991-775460 19911015

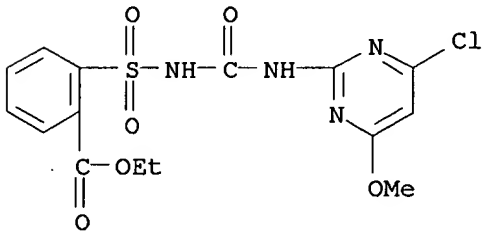
AB The efficacy of an active ingredient (plant growth regulator, systemic insecticide, etc.) is enhanced by applying the agent in combination with a product from the oxidn. of a hull-free, pentose-contg. ext. from seed hulls, such as of rice. Suitable active ingredients are gibberellins, Na o- or p-nitrophenolate, Na 5-nitroguaiacolate, mepiquat chloride, glyphosate, sulfosate, Calixin, Pinnacle, Classic, Pursuit, etc.

IT **1071-83-6**, Glyphosate **90982-32-4**, Classic
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(seed hull ext. assimilation agents for agrochem. compns.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 27 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:353166 HCAPLUS
DOCUMENT NUMBER: 125:28286
TITLE: Synergistic herbicides containing 1-(2,6-dichloro-4-

difluoromethylphenyl)-5-(2-chloropropionamido)-4-nitropyrazole
INVENTOR(S): Dahmen, Peter; Dollinger, Markus; Schallner, Otto
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 11 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4435476	A1	19960411	DE 1994-4435476	19941004 <--
WO 9610333	A1	19960411	WO 1995-EP3714	19950921 <--
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9535691	A1	19960426	AU 1995-35691	19950921 <--
EP 784431	A1	19970723	EP 1995-932779	19950921 <--
EP 784431	B1	20000308		
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT				
ES 2144631	T3	20000616	ES 1995-932779	19950921

PRIORITY APPLN. INFO.: DE 1994-4435476 A 19941004
WO 1995-EP3714 W 19950921
OTHER SOURCE(S): MARPAT 125:28286

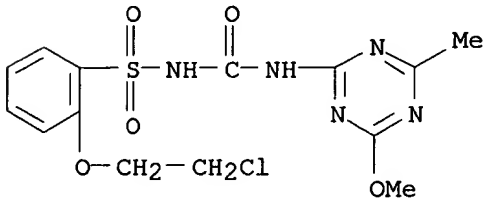
AB Compns. contg. 1-(2,6-dichloro-4-difluoromethylphenyl)-5-(2-chloropropionamido)-4-nitropyrazole in combination with known com. compds. from classes such as carbamoyltriazolinones, alkylanilines, carbamic acids and esters, carbamic acid amides and imides, diazin(on)es or triazin(on)es, ureas, nitriles, thiocarbamates, etc., are selective, synergistic herbicides.

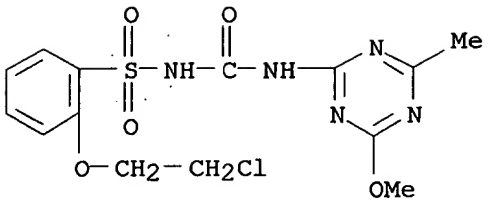
IT **1071-83-6**, Glyphosate **82097-50-5**, Triasulfuron **86209-51-0**, Primisulfuron methyl **94125-34-5**, Prosulfuron
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicides contg. dichlorodifluoromethylphenyl chloropropionamidonitropyrazole)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

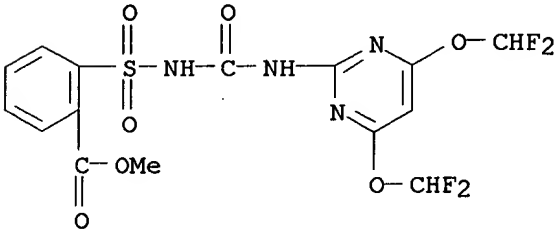
$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 82097-50-5 HCAPLUS
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

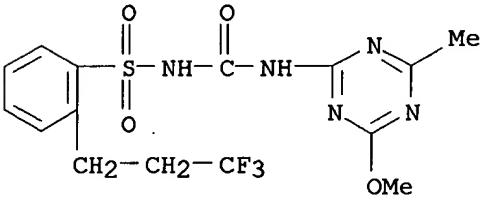




RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 94125-34-5 HCAPLUS
CN Benzenesulfonamide, N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]-2-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)



L39 ANSWER 28 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:350337 HCAPLUS
DOCUMENT NUMBER: 125:3610
TITLE: Herbicidal compositions containing DMSO
INVENTOR(S): Smale, Bernard
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9608148	A2	19960321	WO 1995-US12410	19950901 <--
WO 9608148	A3	19960502		

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

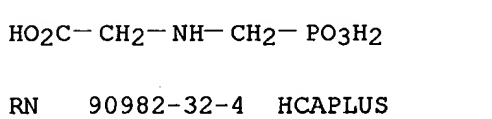
US 5597778	A	19970128	US 1995-475987	19950607	<--
AU 9538236	A1	19960329	AU 1995-38236	19950901	<--
AU 711633	B2	19991021			
EP 804075	A2	19971105	EP 1995-936203	19950901	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE					
JP 10505097	T2	19980519	JP 1995-510441	19950901	
BR 9508668	A	20020618	BR 1995-8668	19950901	

PRIORITY APPLN. INFO.:
US 1994-300267 A 19940902
US 1995-475987 A 19950607
WO 1995-US12410 W 19950901

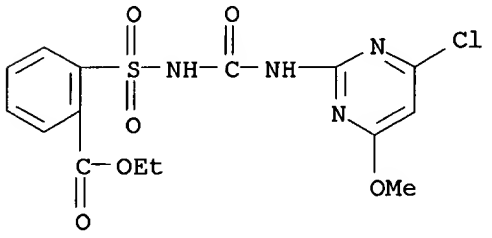
AB The addn. of DMSO to herbicidal compns. makes it possible to decrease the amt. of active herbicidal agent required for desired activity without loss of effectiveness against target plants. The most preferred compns. for application to the plates contain 1-2.5% DMSO. However, in some instances, it may be advisable to use as much as 3% DMSO. The addn. of the DMSO makes it possible to provide a liq. of relatively high stability.

IT **1071-83-6**, Glyphosate **90982-32-4**, Chlorimuron ethyl
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicidal compns. contg. DMSO and)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 29 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:203130 HCAPLUS
DOCUMENT NUMBER: 124:223740
TITLE: Aryluracil or arylthiouracil herbicides.
INVENTOR(S): Dollinger, Markus; Wetcholowsky, Ingo; Andree, Roland; Drewes, Mark Wilhelm
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
DE 4432888	A1	19960321	DE 1994-4432888	19940915	<--
WO 9608151	A1	19960321	WO 1995-EP3472	19950904	<--
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US					
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
CA 2199846	AA	19960321	CA 1995-2199846	19950904	<--
AU 9535213	A1	19960329	AU 1995-35213	19950904	<--
EP 781093	A1	19970702	EP 1995-931983	19950904	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE					
CN 1157552	A	19970820	CN 1995-195061	19950904	<--
BR 9508929	A	19980106	BR 1995-8929	19950904	
HU 77013	A2	19980302	HU 1997-1964	19950904	
JP 10505603	T2	19980602	JP 1995-509868	19950904	

PRIORITY APPLN. INFO.: DE 1994-4432888 19940915
WO 1995-EP3472 19950904

OTHER SOURCE(S): MARPAT 124:223740

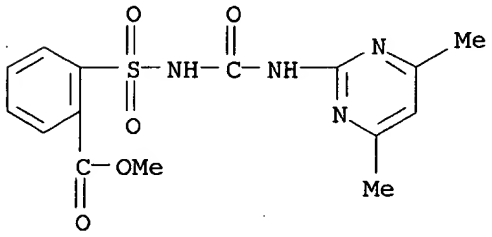
AB The title compds. I and II [Q1,Q2=O or S; R1=H or halo; R2=H or CN; R3=A1A2A3; A1,A2=bond,O,S,SO,etc.; A3=H,OH,SH,NH2, etc.; R4,R5=R1,(un)substituted alkyl; R6=H,OH,NH2, etc.] are semi-selective or nonselective herbicides. I and II are optionally mixed with known herbicides, such as 2,4-D, triclopyr, glufosinate ammonium, bialaphos, glyphosate, imazapyr, oxyfluorfen and atrazine.

IT **1071-83-6D**, Glyphosate, mixts. with aryluracil or arylthiouracil derivs. **74222-97-2D**, Sulfometuron methyl, mixts. with aryluracil or arylthiouracil derivs.
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(semi-selective or nonselective herbicides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 30 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:193888 HCAPLUS
DOCUMENT NUMBER: 124:241488
TITLE: Validation of pH-metric technique for measurement of pKa and log POW of ionizable herbicides
AUTHOR(S): Comer, J.; Chamberlain, K.; Evans, A.
CORPORATE SOURCE: Sirius Analytical Instruments Ltd., East Sussex, RH18 5DW, UK
SOURCE: SAR and QSAR in Environmental Research (**1995**), 3(4), 307-13
CODEN: SQERED; ISSN: 1062-936X
PUBLISHER: Gordon & Breach
DOCUMENT TYPE: Journal
LANGUAGE: English

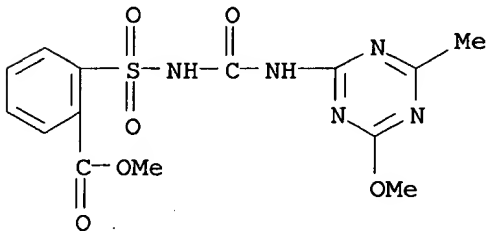
AB Our aim in this study was to validate the use of the pH-metric technique (based on potentiometric titrn.) for measurements of pKa and log POW of ionizable std. substances and herbicides. The values obtained show good correlation with results from other techniques, including shake-flash and HPLC (high-pressure liq. chromatog.). The OECD Guideline for Testing of Chems. 117, adopted 30th Mar. 1989, describes the use of HPLC for the measurement of log POW. It is hoped that these studies and further testing of this technique will permit it to be included in these OECD guidelines.

IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron-methyl
RL: ANT (Analyte); ANST (Analytical study)
(validation of pH-metric technique for measurement of pKa and log POW of ionizable herbicides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



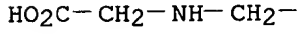
L39 ANSWER 31 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:977634 HCAPLUS
DOCUMENT NUMBER: 124:3006
TITLE: The stability of weed seedling population models and parameters in eastern Nebraska corn (Zea mays) and soybean (Glycine max) fields

AUTHOR(S): Johnson, Gregg A.; Mortensen, David A.; Young, Linda J.; Martin, Alex R.
CORPORATE SOURCE: Dep. Biom., Univ. Nebraska, Lincoln, NE, 68583-0915, USA
SOURCE: Weed Science (**1995**), 43(4), 604-11
CODEN: WEESA6; ISSN: 0043-1745
PUBLISHER: Weed Science Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Intensive field surveys were conducted in eastern Nebraska to det. the frequency distribution model and assocd. parameters of broadleaf and grass weed seedling populations. The neg. binomial distribution consistently fit the data over time (1992 to 1993) and space (fields) for both the inter and intrarow broadleaf and grass weed seedling populations. The other distributions tested (Poisson with zeros, Neyman type A, logarithmic with zeros, and Poisson-binomial) did not fit the data as consistently as the neg. binomial distribution. Assocd. with the neg. binomial distribution is a k parameter. K is a nonspatial aggregation parameter related to the variance at a given mean value. The k parameter of the neg. binomial distribution was consistent across weed d. for individual weed species in a given field except for foxtail spp. populations. Stability of the k parameter across field sites was assessed using the likelihood ratio test. There was no stable or common k value across field sites and years for all weed species populations. The lack of stability in k across field sites is of concern, because this parameter is used extensively in the development of parametric sequential sampling procedures. Because k is not stable across field sites, k must be estd. at the time of sampling. Understanding the variability in k is crit. to the development of parametric sequential sampling strategies and understanding the dynamics of weed species in the field.

IT **1071-83-6**, Glyphosate **171423-35-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(stability of weed seedling population models and parameters in eastern Nebraska corn and soybean fields treated with)

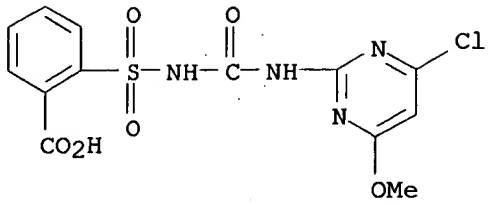
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 171423-35-1 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one, 2-chloro-N-(2,6-diethylphenyl)-N-(methoxymethyl)acetamide and 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone (9CI) (CA INDEX NAME)

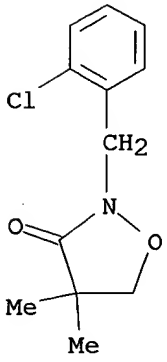
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



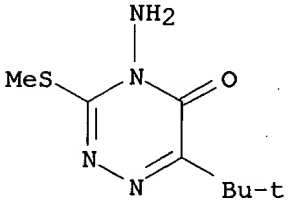
CM 2

CRN 81777-89-1
CMF C12 H14 Cl N O2



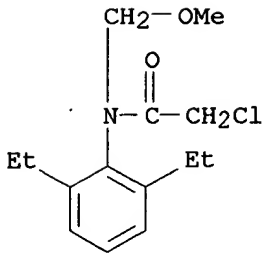
CM 3

CRN 21087-64-9
CMF C8 H14 N4 O S



CM 4

CRN 15972-60-8
CMF C14 H20 Cl N O2



L39 ANSWER 32 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:864965 HCAPLUS
DOCUMENT NUMBER: 123:249208
TITLE: Metabolites of Colletotrichum tabacum or orcinol for activity enhancement of herbicides, the herbicide compositions, and activity enhancement of herbicides with them
INVENTOR(S): Gohara, Masatoshi; Oohata, Tomoko; Kiritani, Yukio
PATENT ASSIGNEE(S): Noyaku Baio Tekunorojii Kaihat, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07196425	A2	19950801	JP 1993-349291	19931228 <--

PRIORITY APPLN. INFO.: JP 1993-349291 19931228

AB Activities of herbicides are enhanced by using metabolites of C. tabacum, orcinol (I) and/or 4-chloroorcinol (II). C. tabacum was cultured at 25.degree. and pH 5.0-6.7 for 6 days twice, the culture medium (16 L) was filtered, and the filtrate was fractionated and subjected to HPLC to give 0.6 mg I and 0.8 mg II. Concomitant application of glyphosate (III) (at 3 g/are) and I (at 5 g/are) showed higher activity in control of Xanthium strumarium, Abutilon theophrasti, etc. than that of single application of III.

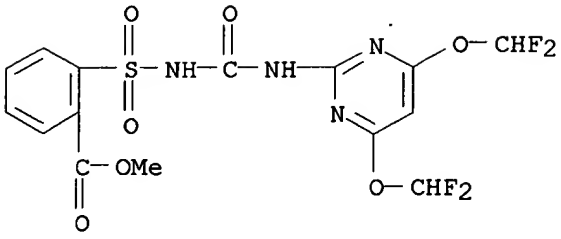
IT **1071-83-6**, Glyphosate **86209-51-0**, Beacon **90982-32-4**, Classic
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(metabolites of Colletotrichum tabacum, (chloro)orcinol for activity enhancement of herbicides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

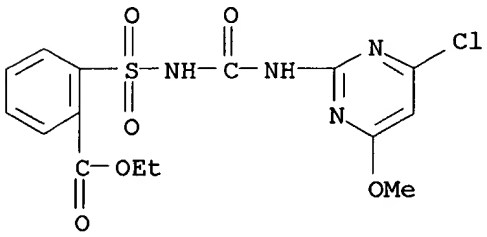
$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX

NAME)



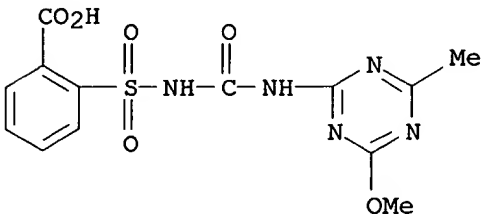
RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 33 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:743109 HCAPLUS
DOCUMENT NUMBER: 123:163218
TITLE: Downy brome (Bromus tectorum), jointed goat-grass (Aegilops cylindrica) and horseweed (Conyza canadensis) control in fallow
AUTHOR(S): Wiese, Allen F.; Salisbury, Clay D.; Bean, Brent W.
CORPORATE SOURCE: Res. Ctr., Texas A & M Univ., Amarillo, TX, 79106, USA
SOURCE: Weed Technology (**1995**), 9(2), 249-54
CODEN: WETEE9; ISSN: 0890-037X
PUBLISHER: Weed Science Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Jointed goat-grass, downy brome, and horseweed are increasingly troublesome winter annual weeds during fallow periods in conservation-tillage systems in the southern Great Plains. These expts. detd. the optimum weed size, vigor, and min. herbicide rate required for 95% or better control of these weeds on fallow land. Jointed goat-grass and downy brome were controlled best when plants were 10 cm or less tall and growing vigorously at time of treatment. Horseweed was controlled best when plants were 30 cm tall and growing vigorously. Based on local retail and application costs and assuming optimum conditions for control, the 2 most economical herbicide treatments that controlled each weed 95% or better were: jointed goat-grass, clethodim at 250 g ai/ha and glyphosate + 2,4-D at 249 + 479 g ae/ha; downy brome, quizalofop at 18 g ai/ha and glyphosate + 2,4-D at 582 + 950 g ae/ha; and horseweed, 2,4-D at 560 g ae/ha and metsulfuron at 5 g ai/ha.
IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(Downy brome and jointed goat-grass and horseweed control in fallow)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

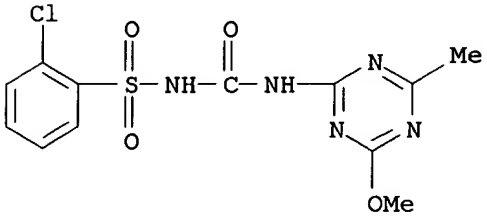
RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 34 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:665526 HCAPLUS
DOCUMENT NUMBER: 123:77059
TITLE: Efficiency of herbicides depending on atmospheric precipitation
AUTHOR(S): Spiridonov, Yu. Ya.; Raskin, M. S.; Nikitin, N. V.
CORPORATE SOURCE: Vserossiisk. Nauchno-Issled, Inst. Fitopatol, Russia
SOURCE: Agrokhimiya (**1995**), (4), 35-41
CODEN: AGKYAU; ISSN: 0002-1881
PUBLISHER: Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB In glasshouse expts. with Xanthium, the time of penetration into the plant for a 50% lethal effect (HPT50) varied widely with different herbicides: Sangor 5, Glean 5, G 4136 (picloram-2,4-D mixt.) 14, 2,4-D 34, and glyphosate 524 min. The penetration rate depended on the test plant, the mode of application, presence of surfactants, atm. pptn., and other factors. Thus, the HPT50 (buckwheat) for Fenfiz (chlorsulfuron-2,4-D mixt.) was 73 min and 400 min, resp., with and without 2% surfactant. Herbicidal activity was not compromised if there was an interval of .gtoreq.2 h between application and the start of rain.
IT **1071-83-6**, Glyphosate **64902-72-3**, Glean
131582-60-0, Fenfiz
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(herbicide penetration and sensitivity to rain)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

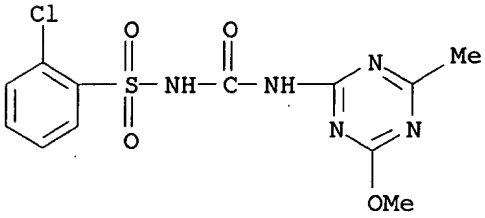
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 131582-60-0 HCAPLUS
CN Acetic acid, (2,4-dichlorophenoxy)-, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

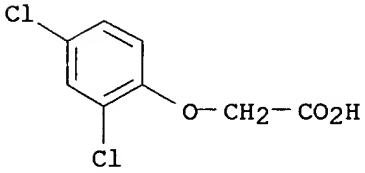
CM 1

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S



CM 2

CRN 94-75-7
CMF C8 H6 Cl2 O3



L39 ANSWER 35 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:582942 HCAPLUS

DOCUMENT NUMBER: 123:3266
TITLE: Non-selective and selective herbicide combinations in stale seedbed (Glycine max)
AUTHOR(S): Hydrick, David E.; Shaw, David R.
CORPORATE SOURCE: Dep. Plant & Soil Sci., Mississippi State Univ., Mississippi State, MS, 39762, USA
SOURCE: Weed Technology (**1995**), 9(1), 158-65
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Field expts. were established in 1991 and 1992 on silty clay and sandy loam soils to evaluate combinations of non-selective and selective herbicides for stale seedbed soybean weed control. Metribuzin PRE controlled sicklepod and pitted morningglory more consistently than other treatments. At 9 wk after planting, antagonism occurred in most cases on sicklepod control when metribuzin was tank-mixed with a non-selective herbicide. Other selective herbicides required addn. of a non-selective herbicide at planting to effectively control sicklepod and pitted morningglory. Sicklepod and pitted morningglory control was better with POST selective herbicides when following glufosinate or paraquat than when following glyphosate or SC-0224. In most instances a follow-up POST treatment was needed to maintain weed control from non-selective herbicides applied PRE. Metribuzin and metribuzin plus chlorimuron increased soybean yields when tank-mixed with paraquat compared with yields obtained with paraquat alone.

IT **1071-83-6**, Glyphosate **123385-65-9**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(non-selective and selective herbicide combinations in stale seedbed soybean weed control)

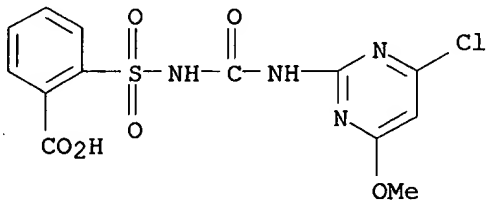
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 123385-65-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one (9CI) (CA INDEX NAME)

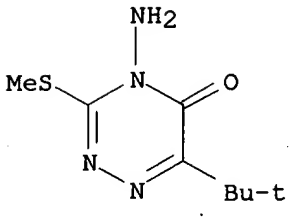
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S



L39 ANSWER 36 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:578703 HCAPLUS
DOCUMENT NUMBER: 122:294592
TITLE: Melt granulation with dielectric heating of agricultural or pharmaceutical compositions
INVENTOR(S): Freeman, Roy Quinn, III
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

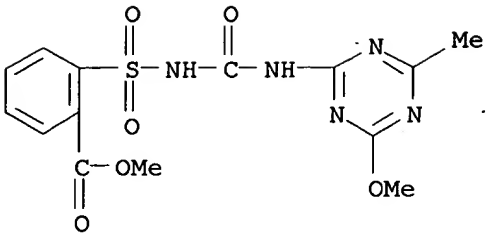
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9509044	A1	19950406	WO 1994-US10585	19940928 <--
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, NO, NZ, PL, RO, RU, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9480104	A1	19950418	AU 1994-80104	19940928 <--

PRIORITY APPLN. INFO.: US 1993-128954 19930929
WO 1994-US10585 19940928

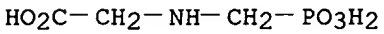
AB Dielec. heating is used to melt the compns. for granulation with agitation.

IT **74223-64-6**, Metsulfuron methyl
RL: AGR (Agricultural use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(melt granulation with dielec. heating of agricultural or pharmaceutical compns.)

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



IT **1071-83-6**, Glyphosate
RL: TEM (Technical or engineered material use); USES (Uses)
(wetcake; melt granulation with dielec. heating of agricultural or pharmaceutical compns.)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L39 ANSWER 37 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:573959 HCAPLUS
DOCUMENT NUMBER: 122:308749
TITLE: Water-dispersible granular agricultural compositions made by heat extrusion
INVENTOR(S): Sandell, Lionel Samuel; Wysong, Robert David
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9508265	A1	19950330	WO 1994-US9632	19940829 <--
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, NO, NZ, PL, RO, RU, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2172399	AA	19950330	CA 1994-2172399	19940829 <--
AU 9476383	A1	19950410	AU 1994-76383	19940829 <--
AU 689499	B2	19980402		
EP 720427	A1	19960710	EP 1994-926594	19940829 <--
EP 720427	B1	19980624		
R: AT, CH, DE, ES, FR, GB, IE, IT, LI				
CN 1131899	A	19960925	CN 1994-193523	19940829 <--
CN 1102336	B	20030305		
BR 9407709	A	19970212	BR 1994-7709	19940829 <--
JP 09502975	T2	19970325	JP 1995-509771	19940829 <--
HU 76001	A2	19970630	HU 1996-714	19940829 <--
HU 216349	B	19990628		
AT 167609	E	19980715	AT 1994-926594	19940829

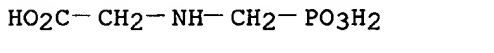
ES 2118433	T3	19980916	ES 1994-926594	19940829	
ZA 9406999	A	19960312	ZA 1994-6999	19940912	<--
US 5714157	A	19980203	US 1996-617862	19960320	

PRIORITY APPLN. INFO.: US 1993-125895 A 19930923
WO 1994-US9632 W 19940829

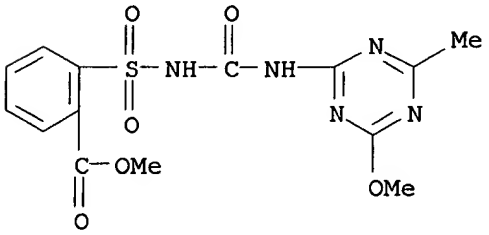
AB Rapidly disintegrating water-dispersible granular agricultural compns. comprising by wt. based on the total wt. of the compn. (a) 0.01-80% of one or more active ingredients, (b) 0-60% of a base, (c) 5-95% of urea, (d) 1-30% of one or more urea modifiers, (e) optionally one or more additives selected from the group consisting of wetting agents, dispersants, lubricants, anti-caking agents, chem. stabilizers, and inert diluents. The compn. is prepd. by extruding a dry premix through a die or a screen at elevated temps., preferably <115.degree. and cutting breaking, or sieving the extruded strands to form granules. Thus, a premix formulation contg. metsulfuron-Me 22, Lomar 5, Morwet 3, K2HPO4 10, and urea 60% was extruded under reported conditions to give free-flowing granules with av. disintegration time 24 s.

IT **1071-83-6P**, Glyphosate **74223-64-6P**, Metsulfuron-methyl **101200-48-0P**, Tribenuron-methyl **128569-20-0P**, Chlorimuron-methyl
RL: AGR (Agricultural use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-dispersible granular agricultural compns. made by heat extrusion)

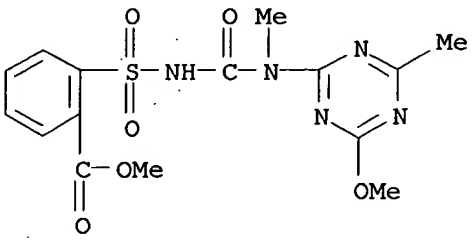
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



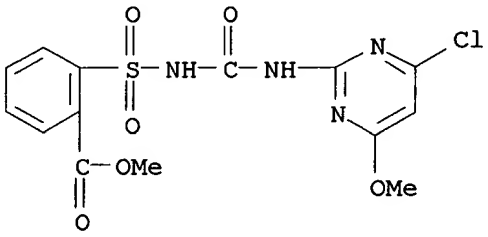
RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 101200-48-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 128569-20-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

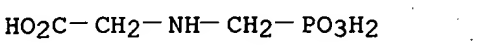


L39 ANSWER 38 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:370014 HCAPLUS
DOCUMENT NUMBER: 122:154056
TITLE: A comparison of herbicide bioassays in cell cultures and whole plants
AUTHOR(S): Olofsdotter, M.; Olesen, A.; Andersen, S. B.; Streibig, J. C.
CORPORATE SOURCE: Department Crop Science, Royal Veterinary and Agricultural University, Frederiksberg, 1871, Den.
SOURCE: Weed Research (**1994**), 34(6), 387-94
CODEN: WEREAT; ISSN: 0043-1737
DOCUMENT TYPE: Journal
LANGUAGE: English

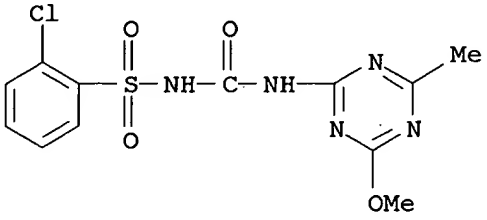
AB Dose-response curves were established for the herbicides chlorsulfuron, metsulfuron-Me, ethametsulfuron-Me, imazamethabenz and glyphosate. The plant species were Daucus carota L. and Triticum aestivum L. in cell culture assays, and D. carota L., T. aestivum L., Stellaria media L., Chenopodium album L. and Avena sativa L. in whole plant assays. Potency ranking of herbicides were similar in the two assays. Low doses of herbicide stimulated growth in both assays, but stimulation was greater in cell cultures. Image processing measured growth in cell cultures and was more sensitive to small differences in responses than manual counts of cell colonies. Dose-response curves had the same shape in both assays, but cell cultures were more sensitive than were whole plants.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
74223-64-6, Metsulfuron-methyl
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(comparison of herbicide bioassays in cell cultures and whole plants)

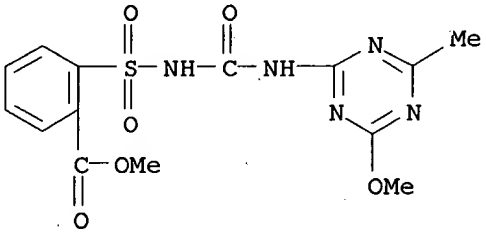
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



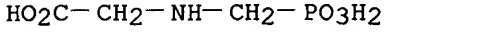
RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



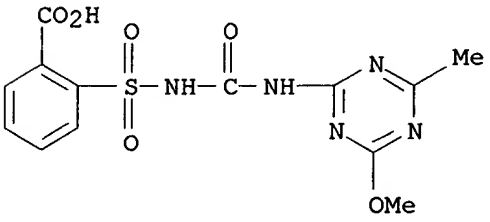
L39 ANSWER 39 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:291399 HCAPLUS
DOCUMENT NUMBER: 122:74504
TITLE: The effect of herbicides on Lotus corniculatus establishment in dryland central Otago
AUTHOR(S): Mitchell, R. B.; Abernethy, R. J.
CORPORATE SOURCE: Invermay Agricultural Centre, Mosgiel, 50034, N. Z.
SOURCE: Proceedings of the New Zealand Plant Protection Conference (**1994**), 47TH, 38-43
CODEN: PNZCEJ; ISSN: 1172-0719
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Herbicides were applied in either autumn or winter and followed by glyphosate, paraquat/diquat or no herbicide in early spring, to control weeds and grasses prior to direct drilling Lotus corniculatus (birdsfoot trefoil) into dry hill country. Successful weed control resulted in increased nos. and prodn. of L. corniculatus. Establishment was greatest in the paraquat/diquat sub-treatment but plant survival in the first 7 mo was best in glyphosate treated sub-treatments. Dry matter prodn. over two seasons was greatest in winter applied carbetamide and propyzamide treatments combined with the spring applied glyphosate treatment.

IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(weed control in Lotus establishment by)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



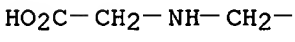
L39 ANSWER 40 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:236041 HCAPLUS
DOCUMENT NUMBER: 122:25798
TITLE: Short- and long-term chemical control of field bindweed (Convolvulus arvensis L.) sprayed during summer and resultant crop yields
AUTHOR(S): Matic, R.; Black, I.D.
CORPORATE SOURCE: Northfield Research Laboratories, South Australian Research and Development Institute, Adelaide, 5001, Australia
SOURCE: Plant Protection Quarterly (**1994**), 9(3), 111-13
CODEN: PPQUE8; ISSN: 0815-2195
PUBLISHER: Plant Protection Quarterly
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In an expt. at Freeling, South Australia, a range of herbicide treatments--2,4-D amine (1.5 kg ha-1), 2,4-D ester (2.4 kg ha-1), MCPA amine (1.5 kg ha-1), dicamba (0.6 kg ha-1), chlorsulfuron (19 g ha-1), metsulfuron-Me (6 g ha-1), triasulfuron (26 g ha-1), fluroxypyr (0.38, 0.75 kg ha-1), clopyralid (0.6 kg ha-1), dicamba + MCPA (0.24 + 1.0 kg ha-1), chlorsulfuron + 2,4-D (19 g + 1.5 kg ha-1), metsulfuron-Me + 2,4-D (6 g + 1.5 kg ha-1) and 2,4-D + glyphosate (0.9 + 0.45 kg ha-1)--were applied at the flowering stage to field bindweed in Jan. 1989 and the same plots were resprayed in Jan. 1990. All treatments contg. 2,4-D or MCPA exhibited 90-100% control of existing stem growth within three to five weeks of application. None of the above treatments showed control of new stems of field bindweed in the next growing season and they did not increase the yield of wheat in 1989 or barley in 1990 sown on the exptl. plots. Glyphosate was also applied in 1989 and 1990. The lowest rate of

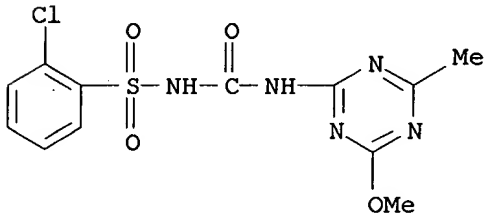
glyphosate (1.1 kg ha-1) had no significant effect on field bindweed stems in the next growing season. The two higher rates of glyphosate (2.2 and 3.2 kg ha-1) resulted in an av. 27% control of bindweed stems the year after final application, and increased wheat yield by 19% in 1989 and barley yield by 40% in 1990. Imazapyr 0.38 and 0.75 kg ha-1 was applied in 1989 only. The treatments resp. showed an av. 97% and 100% control of field bindweed stems in both the first and second year after application and 100% in the third year. Wheat yield was reduced by 52% and 97% resp. in 1989, due to residual imazapyr. Barley yield was increased by 80% and 60% resp. in 1990 in the imazapyr treatments. Field pea yield was increased by 164% and 159% resp. in 1991.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **74223-64-6**, Metsulfuron-methyl **82097-50-5**, Triasulfuron **134501-69-2**, 2,4-D Amine-chlorsulfuron mixt. **137988-51-3**, 2,4-D Amine-metsulfuron-methyl mixt.
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(control of field bindweed and resultant crop yields)

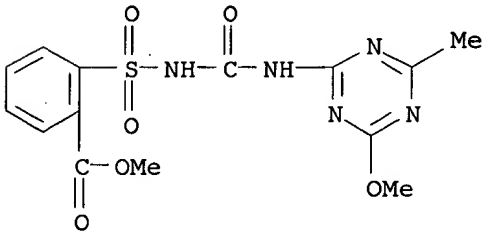
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

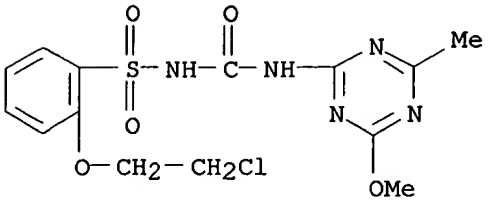


RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 82097-50-5 HCAPLUS

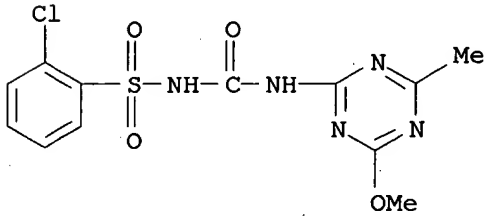
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 134501-69-2 HCAPLUS
CN Acetic acid, (dichlorophenoxy)-, compd. with N-methylmethanamine (1:1), mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

CM 1

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S

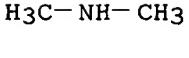


CM 2

CRN 2008-39-1
CMF C8 H6 Cl2 O3 . C2 H7 N

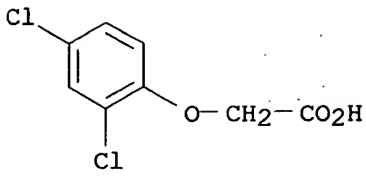
CM 3

CRN 124-40-3
CMF C2 H7 N



CM 4

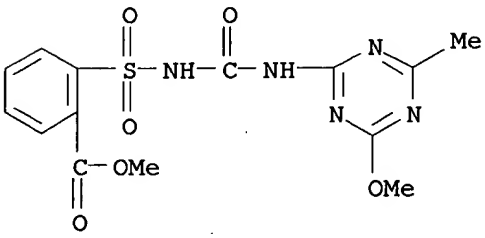
CRN 94-75-7
CMF C8 H6 Cl2 O3



RN 137988-51-3 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, mixt. with N-methylmethanamine (2,4-dichlorophenoxy)acetate (9CI) (CA INDEX NAME)

CM 1

CRN 74223-64-6
CMF C14 H15 N5 O6 S

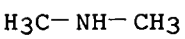


CM 2

CRN 2008-39-1
CMF C8 H6 Cl2 O3 . C2 H7 N

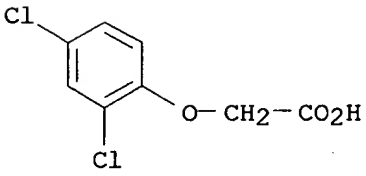
CM 3

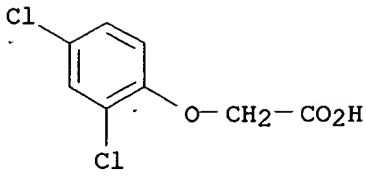
CRN 124-40-3
CMF C2 H7 N



CM 4

CRN 94-75-7
CMF C8 H6 Cl2 O3



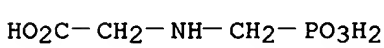


L39 ANSWER 41 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:236038 HCAPLUS
DOCUMENT NUMBER: 122:3473
TITLE: Bulbil watsonia (Watsonia bulbillifera Mathews and Bolus) control with herbicides in Western Australia
AUTHOR(S): Moore, J.H.; Fletcher, G.E.
CORPORATE SOURCE: Department of Agriculture, Albany, 6330, Australia
SOURCE: Plant Protection Quarterly (**1994**), 9(3), 82-5
CODEN: PPQUE8; ISSN: 0815-2195
PUBLISHER: Plant Protection Quarterly
DOCUMENT TYPE: Journal
LANGUAGE: English

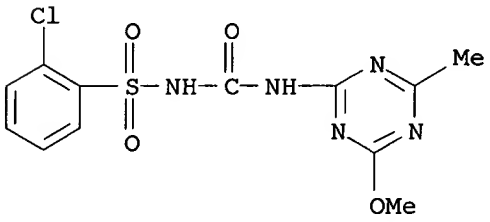
AB The herbicides 2,2-DPA and glyphosate are shown to have similar cost effectiveness for the control of bulbil watsonia. Annual applications, of 7.4 to 14.8 kg ha-1 a.i. of 2,2-DPA or 4.5 kg ha-1 a.i. of glyphosate, in Sept. when bulbil watsonia was in the stem elongation stage provided high levels of control. Chlorsulfuron and metsulfuron were ineffective at similar costs of herbicide.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(Bulbil watsonia herbicides)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

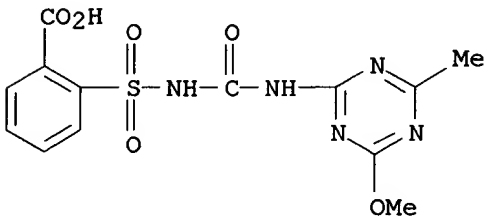


RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS

CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

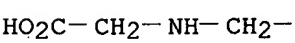


L39 ANSWER 42 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:572987 HCAPLUS
DOCUMENT NUMBER: 121:172987
TITLE: Canada thistle (Cirsium arvense) control in no-tillage corn (Zea mays)
AUTHOR(S): Glenn, Scott; Heimer, Lane K.
CORPORATE SOURCE: Agron. Dep., Univ. Maryland, College Park, MD, USA
SOURCE: Weed Technology (**1994**), 8(1), 134-8
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

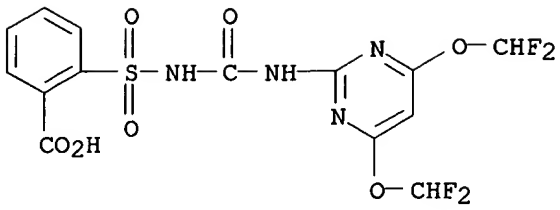
AB Canada thistle control in no-tillage corn was studied in Western Maryland from 1990 to 1992. The best treatment at planting for controlling Canada thistle was a tank mixt. of 2240 g/ha glyphosate plus 560 g/ha 2,4-D. Clopyralid applied at 210 and 280 g/ha alone and 106 g/ha tank mixed with 560 g/ha 2,4-D effectively controlled Canada thistle in no-tillage corn (85 to 96%). Nicosulfuron applied at 35 g/ha and 20 or 40 g/ha primisulfuron suppressed Canada thistle (59 to 75%). Tank mixts. of nicosulfuron or primisulfuron with 2,4-D or dicamba generally increased Canada thistle control (75 to 87%) compared with control by these herbicides applied alone. Treatments that controlled Canada thistle generally increased corn yields compared with the weedy controls. Yield increases were most dramatic in 1991 when pptn. was low.

IT **1071-83-6**, Glyphosate **113036-87-6**, Primisulfuron **145359-84-8**, Primisulfuron-dicamba mixt. **149090-42-6**, Primisulfuron-2,4-D mixt.
RL: BIOL (Biological study)
(Canada thistle control by, in corn)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



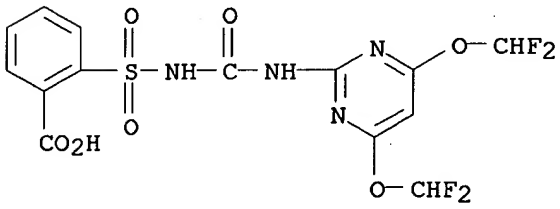
RN 113036-87-6 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 145359-84-8 HCAPLUS
CN Benzoic acid, 3,6-dichloro-2-methoxy-, mixt. with 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

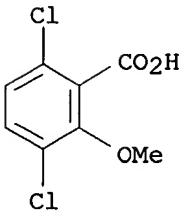
CM 1

CRN 113036-87-6
CMF C14 H10 F4 N4 O7 S



CM 2

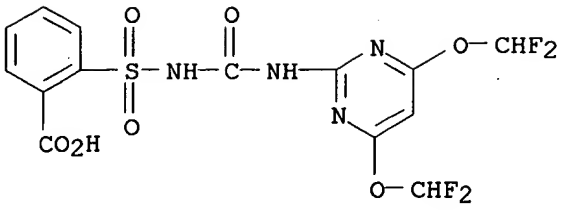
CRN 1918-00-9
CMF C8 H6 Cl2 O3



RN 149090-42-6 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, mixt. with (2,4-dichlorophenoxy)acetic acid (9CI) (CA INDEX NAME)

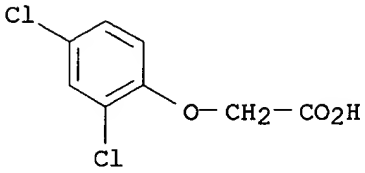
CM 1

CRN 113036-87-6
CMF C14 H10 F4 N4 O7 S



CM 2

CRN 94-75-7
CMF C8 H6 Cl2 O3



L39 ANSWER 43 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:572986 HCAPLUS
DOCUMENT NUMBER: 121:172986
TITLE: Effects of tank-mix combinations of non-selective foliar and selective soil-applied herbicides on three weed species
AUTHOR(S): Hydrick, David E.; Shaw, David R.
CORPORATE SOURCE: Dep. Plant Pathol. Weed Sci., Miss. State Univ., Mississippi State, MS, 39762, USA
SOURCE: Weed Technology (**1994**), 8(1), 129-33
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Greenhouse expts. were established to investigate the effects of tank-mixing glyphosate, paraquat, or glufosinate with metribuzin plus chlorimuron, imazaquin, or metribuzin on entireleaf morningglory, sicklepod, and johnson grass control. Antagonism was the most frequent interaction, and usually occurred when the lower rates of non-selective foliar-active herbicides were used in tank mixts. with selective soil-active herbicides. Antagonism occurred on all species when 180 g/ha paraquat was tank-mixed with 90 g /ha metribuzin plus 15 g/ha chlorimuron. When the rates of non-selective herbicide were increased, antagonism was usually overcome. Antagonism also occurred on entireleaf morningglory control when 210 g/ha glyphosate was tank-mixed with 90 g/ha metribuzin plus 15 g/ha chlorimuron or 36 g/ha imazaquin. When lower rates of paraquat or glufosinate were tank-mixed with 210 g/ha metribuzin, antagonism also occurred. Less antagonism was noted with glufosinate.

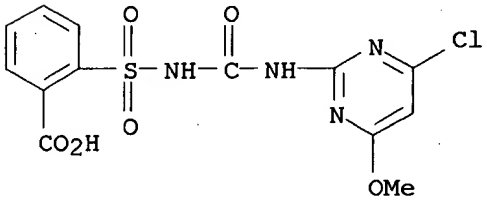
IT **1071-83-6**, Glyphosate **123385-65-9**, Chlorimuron-metribuzin mixt.
RL: BIOL (Biological study)
(tank mixes contg., entireleaf morningglory and johnson grass and sicklepod response to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 123385-65-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one (9CI) (CA INDEX NAME)

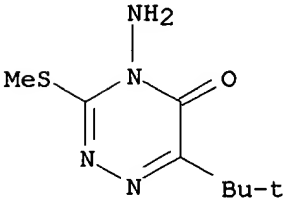
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S



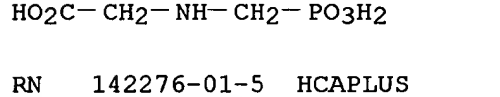
L39 ANSWER 44 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:572977 HCAPLUS
DOCUMENT NUMBER: 121:172977
TITLE: Herbicide combinations for soybean (Glycine max) planted in stale seedbed
AUTHOR(S): Lanie, Andrew J.; Griffin, James L.; Vidrine, P. Roy; Reynolds, Daniel B.
CORPORATE SOURCE: Dep. Plant Pathol. Crop Physiol., Baton Rouge, LA, 70803, USA
SOURCE: Weed Technology (**1994**), 8(1), 17-22
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Barnyardgrass 7 to 25 cm tall was controlled 48 to 74% with paraquat (420 g/ha), 83 to 87% with glyphosate (1120 g/ha), and 85 to 91% with glufosinate (840 g/ha). In most cases barnyardgrass control was not enhanced with addn. of residual herbicides metribuzin plus chlorimuron, metribuzin, or imazaquin. Barnyardgrass and seedling johnson grass no more than 13 cm tall was controlled at least 90% regardless of herbicide treatment. When rhizome and seedling johnson grass were present, control with glyphosate was 96% compared with 55% for paraquat and 86% with glufosinate. Tank-mixts. of non-selective and residual herbicides generally enhanced control of entireleaf and pitted morningglory, hemp sesbania (15 to 30 cm), and prickly sida (15 to 18 cm). Soybean yields in most cases were not increased with addn. of residual herbicides. Yield following glufosinate applied alone was 25% higher than following paraquat, and for all herbicide treatments yields were at least 45% greater than when a non-selective herbicide was not applied.

IT **1071-83-6**, Glyphosate **142276-01-5**, Paraquat-metribuzin-chlorimuron mixt. **157875-68-8**, Glyphosate-metribuzin-chlorimuron mixt. **157875-69-9**, Glufosinate-metribuzin-chlorimuron mixt.
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicide combinations for soybean (Glycine max) planted in stale seedbed)

RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

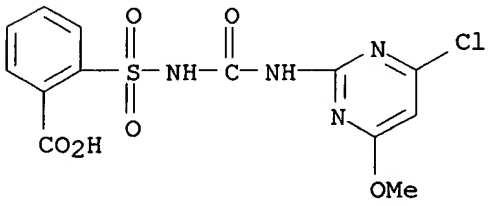


RN 142276-01-5 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dimethyl-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one and 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

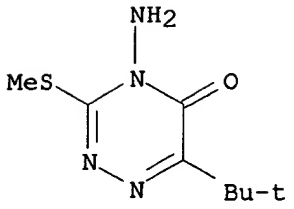
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



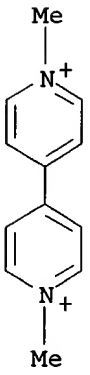
CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S



CM 3

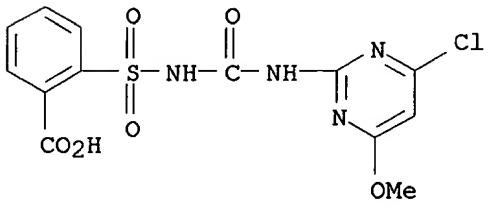
CRN 4685-14-7
CMF C12 H14 N2



RN 157875-68-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one and N-(phosphonomethyl)glycine (9CI) (CA INDEX NAME)

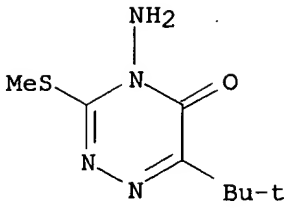
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



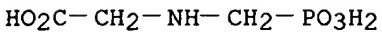
CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S



CM 3

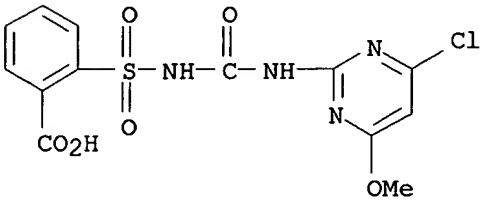
CRN 1071-83-6
CMF C3 H8 N O5 P



RN 157875-69-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one and 2-amino-4-(hydroxymethylphosphinyl)butanoic acid (9CI) (CA INDEX NAME)

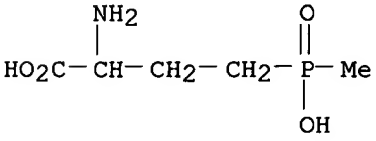
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



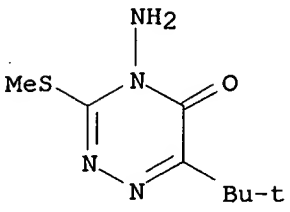
CM 2

CRN 51276-47-2
CMF C5 H12 N O4 P



CM 3

CRN 21087-64-9
CMF C8 H14 N4 O S



L39 ANSWER 45 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:551200 HCAPLUS
DOCUMENT NUMBER: 121:151200
TITLE: Effectiveness of herbicides and tillage on quackgrass (Elytrigia repens) control in corn (Zea mays)
AUTHOR(S): Curran, William S.; Werner, Edward L.; Hartwig, Nathan L.
CORPORATE SOURCE: Dep. Agron., Pennsylvania State Univ., University Park, PA, 16802, USA
SOURCE: Weed Technology (**1994**), 8(2), 324-30
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

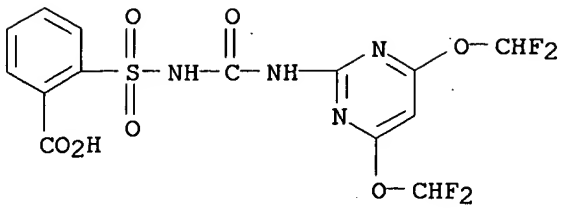
AB Postemergence applications of nicosulfuron and primisulfuron were compared to preplant glyphosate and atrazine plus simazine for quackgrass control in reduced tillage and no-till corn. The level of quackgrass control was reduced by no-till practices. At 6 wk after planting, glyphosate and atrazine plus simazine were most effective in controlling quackgrass. Quackgrass biomass 12 wk after planting indicated that the performance of the herbicides were generally similar, although primisulfuron was less effective in no-till. One year after corn planting, levels of quackgrass control in the tilled plots were the same as or better than in the no-till treatments. Atrazine plus simazine was the most effective herbicide treatment over tillage systems, while primisulfuron was the least effective.

IT **1071-83-6**, Glyphosate **113036-87-6**, Primisulfuron
RL: BIOL (Biological study)
(quackgrass control by, in corn)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 113036-87-6 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 46 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:527872 HCAPLUS
DOCUMENT NUMBER: 121:127872
TITLE: Increasing the effectiveness of pesticides with fatty acid amides.
INVENTOR(S): Bryant, Stephen D.; Lee, James C.; Ellis, M., Sheldon
PATENT ASSIGNEE(S): Buckman Laboratories International, Inc., USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9413140	A1	19940623	WO 1993-US11837	19931213 <--
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RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
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AU 692755	B2	19980618		
EP 673197	A1	19950927	EP 1994-903516	19931213 <--
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FI 9502899	A	19950711	FI 1995-2899	19950613 <--
NO 9502330	A	19950811	NO 1995-2330	19950613 <--

PRIORITY APPLN. INFO.: US 1992-990078 A 19921214
US 1993-73525 A 19930609
WO 1993-US11887 W 19931213

OTHER SOURCE(S): MARPAT 121:127872

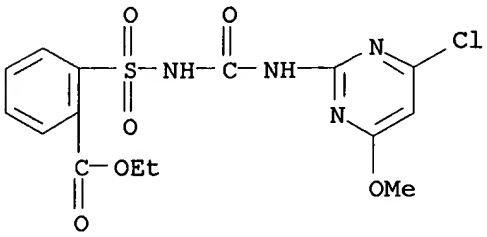
AB The fatty acid amides R2CONRR1 [R,R1 = H,(un)substituted C1-6 alkyl; and R2CO = C8-22 fatty acid residue] are enhancers for pesticides, desiccants, herbicides and fertilizers. Thus, Busperse 47 (tall oil dimethylamide contg. 10% Ipegal RC-620) enhanced the desiccant activity of Des-i-cate for cotton.

IT **1071-83-6**, Glyphosate **90982-32-4**, Chlorimuron ethyl
RL: BIOL (Biological study)

(enhancers for, fatty acid amides as)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

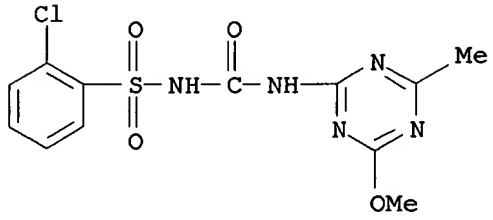
$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)

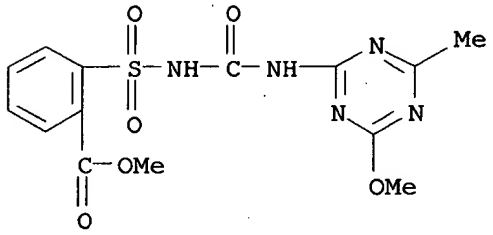


L39 ANSWER 47 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:501777 HCAPLUS
DOCUMENT NUMBER: 121:101777
TITLE: Comparison of cell culture and whole plants in herbicide bioassays
AUTHOR(S): Olofsdotter, M.; Streibig, J. C.; Olesen, A.; Andersen, S. Bode
CORPORATE SOURCE: Dep. Agric. Sci., R. Vet. and Agric. Univ., Frederiksberg, 1871/C, Den.
SOURCE: Brighton Crop Protection Conference--Weeds (**1993**), (VOL. 2), 639-40
CODEN: BCPWE2; ISSN: 0955-1514
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ranking potency of herbicides (chlorsulfuron, metsulfuron-Me, ethametsulfuron-Me, imazamethabenz and glyphosate) at ED50 was similar both in cell culture and in whole plants of Daucus carota L., Triticum aestivum L., Stellaria media L., Chenopodium album L. and Avena sativa L. Low doses of herbicide (< "No effect level") stimulated growth in both types of assays, but stimulation was greatest in cell cultures. Dose response curves had the same shape in both systems, but cell culture were more susceptible than were whole plants. Image processing of callus growth was, when compared with classical methods, more precise at measuring small differences in responses because of its ability to distinguish between intermediate levels of callus growth.
IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
74223-64-6, Metsulfuron-methyl
RL: ANST (Analytical study)
(bioassay, comparison of cell culture and whole plants in)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 48 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:403186 HCAPLUS
DOCUMENT NUMBER: 121:3186
TITLE: Influence of residual herbicides on rate of paraquat and glyphosate in stale seedbed soybean (Glycine max)
AUTHOR(S): Lanie, Andrew J.; Griffin, James L.; Reynolds, Daniel B.; Vidrine, P. Roy
CORPORATE SOURCE: Dep. Plant Pathol. Crop Physiol., Baton Rouge, LA, 70803, USA
SOURCE: Weed Technology (**1993**), 7(4), 960-5
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Field studies were conducted to evaluate weed control with paraquat and glyphosate applied at various rates alone and in combination with residual herbicides. Morningglory, prickly sida, and hemp sesbania control 28 day after treatment was similar regardless of herbicide treatment. In contrast, barnyard grass control when paraquat was tank mixed with pendimethalin plus imazaquin was equal to that of paraquat alone but less than that for tank mixts. with metolachlor plus metribuzin plus chlorimuron or metolachlor plus metribuzin. Barnyard grass control and soybean yield when paraquat was applied at 1050 g ai/ha in combination with metolachlor plus metribuzin plus chlorimuron or metolachlor plus

metribuzin was greater than when the same residual herbicide treatments were applied with paraquat at 350 g/ha. Yield following glyphosate at 840 and 1120 g ai/ha in combination with residual herbicides was no greater than when glyphosate was applied alone, which was reflective of barnyard grass control. Tank mixts. of glyphosate at 1680 g/ha with metolachlor plus metribuzin plus chlorimuron or metolachlor plus metribuzin resulted in soybean yield higher than for glyphosate alone. Regardless of the glyphosate and residual herbicide combination, soybean yield was no greater than when paraquat was applied at 350 g/ha in combination with metolachlor plus metribuzin plus chlorimuron.

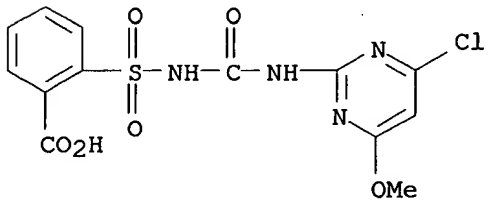
IT **155450-41-2**
RL: BIOL (Biological study)
(residues of, paraquat and glyphosate weed control in soybean response to)

RN 155450-41-2 HCAPLUS

CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one and 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)acetamide (9CI) (CA INDEX NAME)

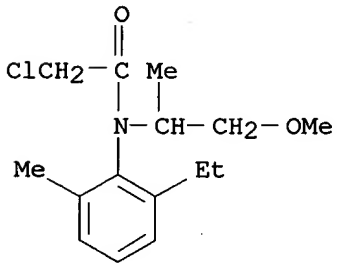
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

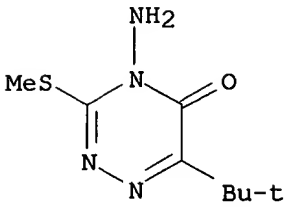
CRN 51218-45-2
CMF C15 H22 Cl N O2



CM 3

CRN 21087-64-9

CMF C8 H14 N4 O S



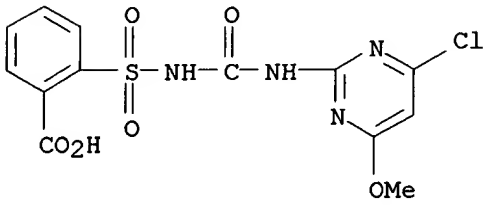
IT **1071-83-6**, Glyphosate
RL: BIOL (Biological study)
(weed control in soybean by, herbicide residues effect on)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

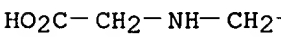
L39 ANSWER 49 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:210702 HCAPLUS
DOCUMENT NUMBER: 120:210702
TITLE: Herbicide tolerance of Grasslands Puna chicory
AUTHOR(S): Hare, M.D.; Rolston, M.P.; Foote, A.G.; Archie, W.J.; Hagerty, G.
CORPORATE SOURCE: Grassl. Res. Cent., AgRes., Palmerston North, N. Z.
SOURCE: Proceedings of the New Zealand Plant Protection Conference (**1993**), 46th, 282-7
CODEN: PNZCEJ; ISSN: 1172-0719
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Eight field trials from 1989 to 1993 examd. the herbicide tolerance of Grasslands Puna chicory (Cichorium intybus L.) to a range of broadleaf herbicides. The pre-emergence herbicides trifluralin and ethalfluralin had no injurious effect on seedling establishment. Bentazone, applied to well-established seedlings did not significantly injure them and was very effective in controlling storksbill (Erodium cicutarium). Well established chicory plants suffered no long term effects from atrazine, bromoxynil + ioxynil mixt., chlorpropham, diuron, metribuzin and paraquat. Low rates of 2,4-DB (0.8 kg/ha) initially checked chicory growth but plants later recovered. Higher rates of 2,4-DB and any rate of MCPB severely injured chicory plants for several months before plants were able to recover.
IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(Grasslands Puna chicory sensitivity to)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

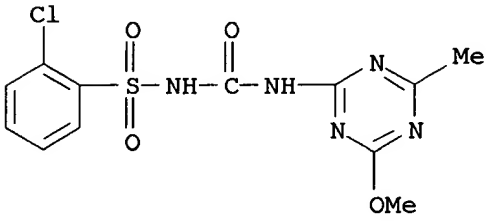
RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



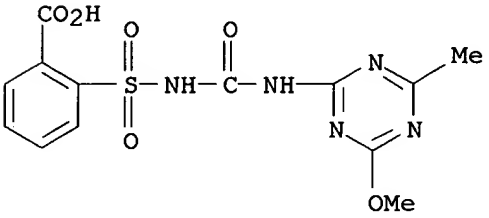
L39 ANSWER 50 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:171834 HCAPLUS
DOCUMENT NUMBER: 120:171834
TITLE: Use of indicator plants in a biological-based system to detect and track airborne herbicides
AUTHOR(S): Al-Khatib, Kassim; Mink, Gaylord I.; Reisenauer, Guy; Parker, Robert
CORPORATE SOURCE: Washington State Univ., Prosser, WA, USA
SOURCE: Proceedings, Annual Meeting - Air & Waste Management Association (**1992**), 85th(Vol. 7), Paper No. 92/157.03, 10 pp.
CODEN: PAMEE5; ISSN: 1052-6102
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A study was carried out to develop a protocol for using a biol.-based system to detect and track airborne herbicides in central Washington, where off-target movement of herbicides is blamed for causing crop injury several miles from the point of application. Species sensitive to chlorsulfuron, metsulfuron, tribenuron, paraquat, glyphosate, bromoxynil, 2,4-D, and dicamba were grown in a greenhouse at Prosser, Washington, and placed at 25 exposure sites at weekly intervals between Apr. 2 and Oct. 15, 1991. After 1 wk exposure, the plants were brought back and obsd. for herbicide symptoms over 28 day period. Symptoms that developed on these species were compared to symptoms caused by disease, insects, adverse weather conditions, and herbicides applied at different rates under controlled conditions. In addn., if herbicide symptoms were obsd., herbicide spray records and weather data in the area were used in the TIMPEL model to det. the source of the potential herbicide drift. The results of the study strongly suggest that the indicator plant species selected for high sensitivity to the herbicides tested can be used to monitor the occurrence of herbicide movement.
IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron **106040-48-6**, Tribenuron
RL: BIOL (Biological study)
(air pollution by off-target movement of, monitoring of, indicator plants for, in central Washington)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



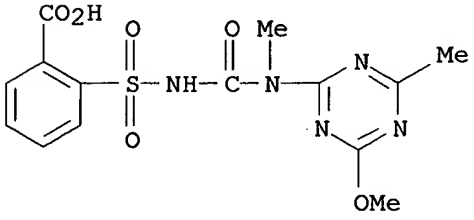
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 106040-48-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 51 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:156607 HCAPLUS
DOCUMENT NUMBER: 120:156607
TITLE: Influence of preseason weed management and in-crop treatments on two successive wheat crops. 2. Take-all severity and incidence of rhizoctonia root rot
AUTHOR(S): Wong, P. T. W.; Dowling, P. M.; Tesoriero, L. A.; Nicol, H. I.
CORPORATE SOURCE: Biol. Chem. Res. Inst., NSW Agric., Rydalmere, 2116, Australia
SOURCE: Australian Journal of Experimental Agriculture (

1993), 33(2), 173-7
CODEN: AJEAEL; ISSN: 0816-1089
DOCUMENT TYPE: Journal
LANGUAGE: English

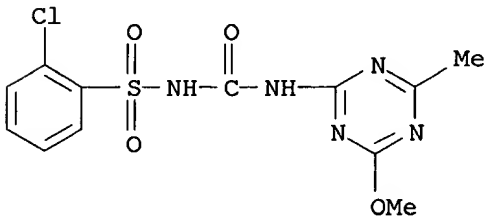
AB The effects of cultivation and herbicide use to control weeds in wheat on wheat growth, the severity of take-all, and the incidence of rhizoctonia root rot were studied for 2 seasons. Preseason treatments were no weed control, paraquat (0.20 kg a.i./ha), glyphosate (0.18 kg a.i./ha or 4 applications of 0.72 kg a.i./ha), and heavy grazing. In-crop treatments were cultivation plus trifluralin, direct drilling plus chlorsulfuron, and direct drilling alone. At the site, take-all was the main disease while rhizoctonia root rot was relatively minor. Glyphosate applied 4 times at 0.72 kg a.i./ha over the previous spring and summer led to greater wheat dry matter (DM) prodn., significantly (P.ltbbrac.0.05) less severe take-all, and a lower incidence of rhizoctonia root rot in the first year than the other preseason treatments. Spraytopping with glyphosate (0.18 kg a.i./ha) or paraquat (0.20 kg a.i./ha) and heavy grazing reduced take-all severity but not the incidence of rhizoctonia root rot. Conventional cultivation resulted in more wheat DM, significantly less severe take-all, and a lower incidence of rhizoctonia root rot than direct drilling. Grain yields reflected the trends of the DM prodn. despite severe yield loss due to head frosting. Plots were split for cultivation and direct drilling in the second year. The highest wheat DM and grain yields were in the cultivated treatments but the effects of cultivation on take-all did not carry over from the first year. In both years, take-all was most severe in the control treatment and least severe in the treatment with the high rate of glyphosate (P.ltbbrac.0.05). In the second wheat crop, however, take-all severity was similar in the 2 glyphosate, paraquat, and grazed treatments. The effect of a weed-free fallow obtained by use of a high rate of glyphosate was nullified in the second wheat crop because of a high carryover of volunteer wheat seedlings during the intervening wet summer. There was also a greater incidence of rhizoctonia root rot in the control than in the other treatments, and cultivation again reduced disease incidence compared with direct drilling.

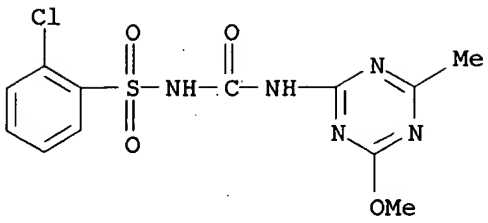
IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(in wheat weed control, take-all and rhizoctonia root rot response to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



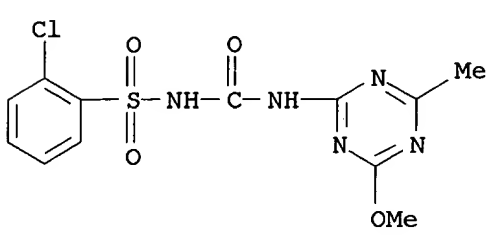


L39 ANSWER 52 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:156606 HCAPLUS
DOCUMENT NUMBER: 120:156606
TITLE: Influence of preseason weed management and in-crop treatments on two successive wheat crops 1. Weed seedling numbers and wheat grain yield
AUTHOR(S): Dowling, P.M.; Wong, P.T.W.
CORPORATE SOURCE: Agric. Res. Vet. Cent., NSW Agric., Orange, 2800, Australia
SOURCE: Australian Journal of Experimental Agriculture (**1993**), 33(2), 167-72
CODEN: AJEAEL; ISSN: 0816-1089
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of 5 preseason management treatments on seed set redn. of annual weed grasses and their regeneration in the following autumn was evaluated in a 2-yr field expt. commencing at Orange in spring 1986. Preseason (spring) treatments were paraquat, glyphosate (2 rates), unsprayed heavy grazing, and unsprayed control. In the first of 2 successive wheat crops (planted 1987), 3 in-crop weed control treatments [control, chlorsulfuron (both sod-seeded), and trifluralin plus cultivation] were imposed. In 1988, the second wheat crop was sown into a cultivated seed bed or direct-drilled. The preseason treatments reduced potential annual grass regeneration by 91-99% compared with the control, with heavy grazing being the best treatment. For each preseason treatment compared with the control, the pattern of actual seedling emergence within the crop during 1987 was similar to that of potential emergence for each grass species (except Lolium rigidum), but nos. were lower and more variable (7-86% of potential nos.). The proportion of Bromus spp. and Vulpia spp. emerging within the crop declined from the first to the second crop, while L. rigidum increased to an av. of 93% of the annual grass population in 1988. Trifluralin plus cultivation increased the control of annual grasses in 1987. In 1988, the 1987 in-crop treatments had little carryover effect on annual grass control; however, wheat grain yield was increased by both chlorsulfuron and trifluralin. Preseason management reduced seed set of annual grass weeds, and this control was maintained under cropping for at least 2 yr (except for L. rigidum). Wheat grain yield responded to this control. Long-term control of L. rigidum where soil is disturbed appears difficult because of apparent long-lived seed in the soil.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(weed control by, in wheat)
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

L39 ANSWER 53 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:127789 HCAPLUS
DOCUMENT NUMBER: 120:127789
TITLE: Enhancement of herbicidal activity with nonionic surfactant blend.
INVENTOR(S): Gednalske, Joe V.; Herzfeld, Robert W.
PATENT ASSIGNEE(S): Cenex/Land O'Lakes Agronomy Co., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

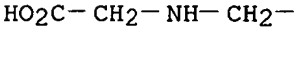
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5260260	A	19931109	US 1992-881473	19920511 <--
CA 2091606	AA	19931112	CA 1993-2091606	19930315 <--
US 5463180	A	19951031	US 1993-149179	19931105 <--

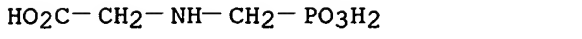
PRIORITY APPLN. INFO.: US 1992-881473 19920511

AB The title nonionic surfactant blend includes nonoxynol and an an acidulated soybean soapstock. The acidulated soybean soapstock comprises total fatty acids 94%-96% by vol., and has a moisture content of .ltoreq.5% by vol. The surfactant blend improved woolly cupgrass control in corn by nicosulfuron.

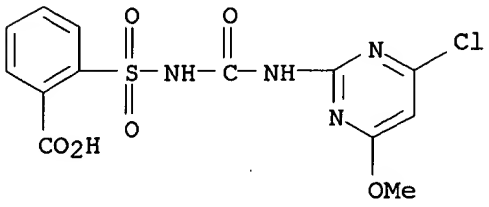
IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
113036-87-6, Primisulfuron
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(enhancement of herbicidal activity of, by nonionic surfactant blend)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

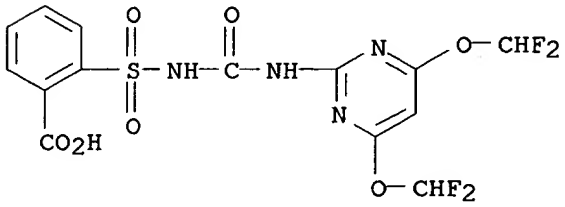




RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 113036-87-6 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



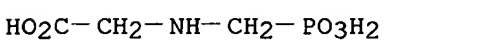
L39 ANSWER 54 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:127596 HCAPLUS
DOCUMENT NUMBER: 120:127596
TITLE: Development of a biologically-based system for detection and tracking of airborne herbicides
AUTHOR(S): Al-Khatib, Kassim; Mink, Gaylord I.; Reisenauer, Guy; Parker, Robert; Westberg, Halvor; Lamb, Brian
CORPORATE SOURCE: N. W. Res. Unit, Wash. State Univ., Mt. Vernon, WA, 98273, USA
SOURCE: Weed Technology (**1993**), 7(2), 404-10
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A protocol was developed for using a biol.-based system to detect and tract airborne herbicides. Common bean, lentil, and pea were selected for their quasidiagnostic sensitivity to chlorsulfuron, thifensulfuron, metasulfuron, tribenuron, paraquat, glyphosate, bromoxynil, 2,4-D, and dicamba. Plants were grown in the greenhouse at Prosser, WA, and placed at 25 exposure sites at weekly intervals between Apr. 2 and Oct. 15, 1991. After 1 wk of field exposure plants were brought back and obsd. for herbicide symptoms over a 28-d period. Symptoms that developed were compared with symptoms caused by disease, insects, adverse weather conditions, and herbicides applied at different rates under controlled conditions on these species. In addn., if herbicide symptoms were obsd., herbicide spray records and weather data in the area were used in a

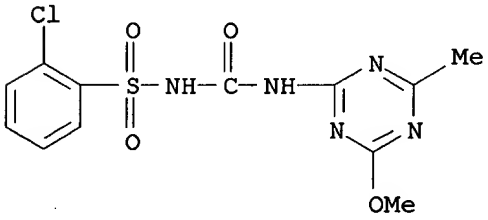
computer model to det. the source of potential herbicide drift. Thus, indicator plant species selected for high sensitivity to herbicides can be used to monitor the occurrence of herbicide movement.

IT **1071-83-6,** Glyphosate **64902-72-3,** Chlorsulfuron **79510-48-8,** Metsulfuron **106040-48-6,** Tribenuron
RL: ANT (Analyte); ANST (Analytical study)
(detection of, plant indicators for)

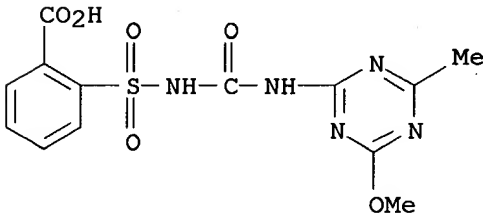
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



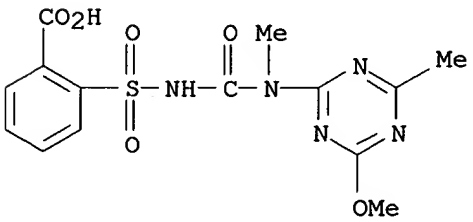
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

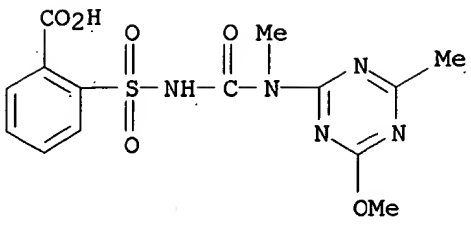


RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 106040-48-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



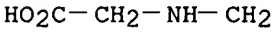


L39 ANSWER 55 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:643564 HCAPLUS
DOCUMENT NUMBER: 119:243564
TITLE: Retreatment with fall-applied herbicides for Canada thistle (Cirsium arvense) control
AUTHOR(S): Donald, William W.
CORPORATE SOURCE: Biosci. Res. Lab., U. S. Dep. Agric., Fargo, ND, 58105, USA
SOURCE: Weed Science (**1993**), 41(3), 434-40
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

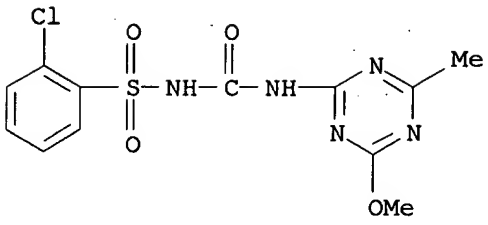
AB Field research was designed to compare the long-term effectiveness of late-Sept. applications of several herbicides for reducing Canada thistle shoot d. on noncropped, untilled abandoned farmland when reapplied annually for 3 yr. Clopyralid at 560 and 840 g ha-1 or picloram at 280 and 560 g ha-1 reduced Canada thistle shoot d. as well as either glyphosate at 0.8 to 2.8 kg ha-1 or dicamba at 1.1 and 2.2 kg ha-1. These treatments were much more effective than 2,4-D at 1.1 and 2.2 kg ha-1, chlorsulfuron at 34 and 67 g ha-1, and metsulfuron at 34 and 67 g ha-1 for progressively reducing Canada thistle shoot d. over three annual fall applications. Picloram and clopyralid greatly reduced and delayed shoot emergence from adventitious root buds in spring after two fall-applied treatments compared with nontreated checks.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
79510-48-8, Metsulfuron
RL: BIOL (Biological study)
(Canada thistle control with)

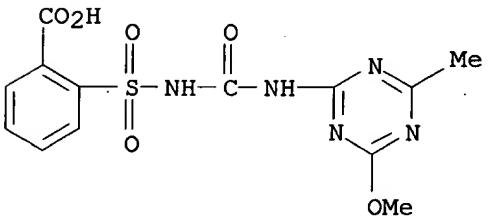
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



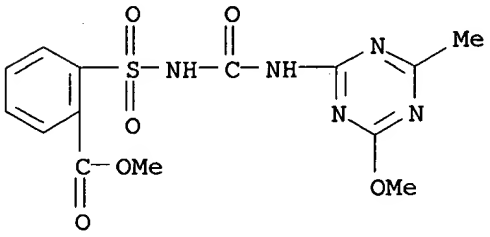
L39 ANSWER 56 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:575810 HCAPLUS
DOCUMENT NUMBER: 119:175810
TITLE: Evaluation of herbicides for the control of common prickly pear (Opuntia stricta var. stricta) in Victoria
AUTHOR(S): Pritchard, G. H.
CORPORATE SOURCE: Keith Turnball Res. Inst., Dep. Conserv. Nat. Resour., Franston, 3199, Australia
SOURCE: Plant Protection Quarterly (**1993**), 8(2), 40-3
CODEN: PPQUE8; ISSN: 0815-2195
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three trials were conducted with seven herbicides on common (or erect) prickly pear in north-east Victoria. High vol. applications (approx. 2000 L ha-1) with a hand-gun were used in all trials, and two trials also included low vol., high concn. sprays (approx. 250 L ha-1) with either a gas-gun or a compression knapsack. The most effective herbicides, when assessed 12 to 18 mo after application, were triclopyr and triclopyr plus picloram, both as low vol. and high vol. sprays, and low vol. sprays of imazapyr and amitrole. MSMA was less effective while glyphosate and metsulfuron-Me gave little or no control. The low vol., high concn. sprays applied less herbicide per treated area than the more dil. high vol. sprays, yet gave equiv. control. The most cost effective treatments were low vol. applications of triclopyr plus picloram at 0.5 kg + 0.17 kg and 1.0 kg + 0.33 kg 100 L-1. One trial compared the effect of including 'Ulvapron' emulsified petroleum oil at 2% vol./vol., and while the oil resulted in some increase in control, particularly with herbicides formulated as emulsifiable concs., the increases were not significant at P = 0.05.

IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron-methyl
RL: BIOL (Biological study)
(for control of common prickly pear)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

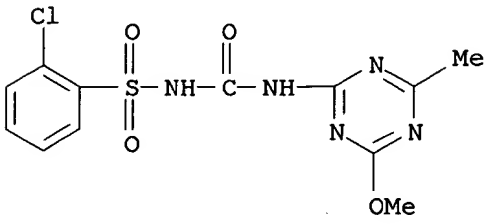
RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 57 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:488569 HCAPLUS
DOCUMENT NUMBER: 119:88569
TITLE: Wine grape (Vitis vinifera L.) response to simulated herbicide drift
AUTHOR(S): Al-Khatib, Kassim; Parker, Robert; Fuerst, E. Patrick
CORPORATE SOURCE: N.W. Res. Cent., Washington State Univ., Mt. Vernon, WA, 98273, USA
SOURCE: Weed Technology (**1993**), 7(1), 97-102
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chlorsulfuron, thifensulfuron, bromoxynil, 2,4-D, glyphosate, and a combination of 2,4-D plus glyphosate were applied on newly planted and established Lemberger wine grapes at 1/3, 1/10, 1/33, and 1/100 of the max. labeled rate in wheat or fallow to simulate exposure to drifted herbicides. All herbicides produced symptoms on grape but the most severe symptoms were with 2,4-D and the least severe with bromoxynil. Newly planted grape was more sensitive to herbicides than established grape. Although established grape recovered from injury caused by all treatments except 2,4-D and the highest rate of chlorsulfuron and glyphosate, newly planted grape recovered only from lower rates of bromoxynil. All herbicides resulted in diagnostic symptoms, but other symptoms were very similar to those caused by other stresses.
IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(grape injury from drifts of)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

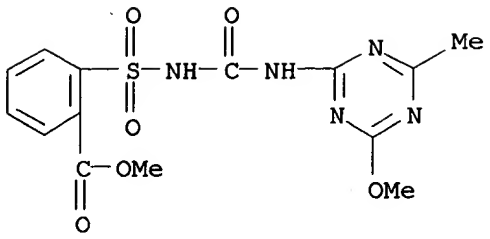
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 58 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:443246 HCAPLUS
DOCUMENT NUMBER: 119:43246
TITLE: Silwet L-77 enhances rainfastness of glyphosate and metsulfuron-methyl when applied to gorse and Scotch broom
AUTHOR(S): Balneaves, John M.
CORPORATE SOURCE: For. Res. Inst., Christchurch, N. Z.
SOURCE: Plant Protection Quarterly (**1992**), 7(3), 109-11
CODEN: PPQUE8; ISSN: 0815-2195
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Glyphosate or metsulfuron-Me with and without Silwet L-77 were applied to potted gorse (Ulex europaceus) and broom (Cytisus scoparius) plants, which were then subjected to simulated rainfall at intervals ranging from 2 min (0) to 24 h after spraying. In the absence of Silwet L-77 rainfall reduced the effectiveness of both glyphosate and metsulfuron-Me. Silwet L-77, esp. at rates of 0.5%, aided rainfastness of glyphosate, and at 0.1% aided rainfastness of metsulfuronmethyl.
IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron-methyl
RL: BIOL (Biological study)
(rainfastness of, Silwet-L-77 enhancement of)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

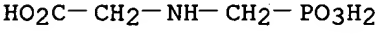


L39 ANSWER 59 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:422761 HCAPLUS
DOCUMENT NUMBER: 119:22761
TITLE: Canada thistle (Cirsium arvense) control with disking and herbicides
AUTHOR(S): Zimdahl, Robert L.; Foster, Gus
CORPORATE SOURCE: Dep. Plant Pathol. Weed Sci., Colorado State Univ., Fort Collins, CO, 80523, USA
SOURCE: Weed Technology (**1993**), 7(1), 146-9
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

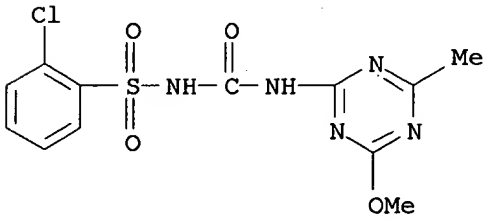
AB Studies from 1985 to 1989 showed that disking 3, 7, 10, 14, or 30 days after applying chlorsulfuron, clopyralid, dicamba, glyphosate, picloram, or 2,4-D did not improve Canada thistle control in uncropped, dryland fields. Disking after a fall or after a fall plus a spring herbicide application did not influence Canada thistle control for any herbicide regardless of the time of herbicide application or the time between application and disking.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(Canada thistle control by, disking in relation to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 60 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:207458 HCAPLUS
DOCUMENT NUMBER: 118:207458
TITLE: Effects of herbicide mixtures and additives on Rhododendron ponticum
AUTHOR(S): Lawrie, J.; Clay, V.
CORPORATE SOURCE: Dep. Agric. Sci., Univ. Bristol, Long Ashton/Bristol, BS18 9AF, UK
SOURCE: Weed Research (**1993**), 33(1), 25-34
CODEN: WEREAT; ISSN: 0043-1737
DOCUMENT TYPE: Journal
LANGUAGE: English

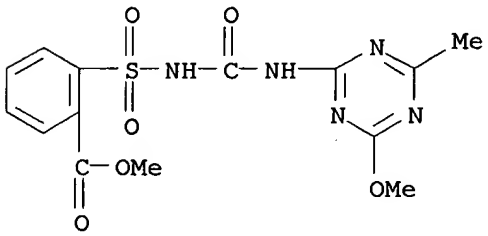
AB The possibility of increasing the activity of glyphosate, imazapyr, sulfonylurea herbicides and triclopyr against Rhododendron ponticum was investigated using container-grown plants. Glyphosate, imazapyr and triclopyr alone and metsulfuron-Me with added surfactant were all phytotoxic, imazapyr and triclopyr being the most effective at the doses used. Thifensulfuron-Me and tribenuron-Me with Mixt. B were ineffective. The surfactants Mixt. B and Silwet L77 consistently increased the activity of imazapyr and metsulfuron-Me. Mixts. of the herbicides did not lead to synergistic activity, and mixing imazapyr and triclopyr depressed the activity of each component. There was some enhancement of activity on R. ponticum when imazapyr and metsulfuron-Me were applied sequentially, 48 h apart.

IT **1071-83-6**, Glyphosate **74223-64-6**, Metsulfuron-methyl **101200-48-0**, Tribenuron-methyl
RL: BIOL (Biological study)
(Rhododendron ponticum control by, mixts. and additives for enhancement of)

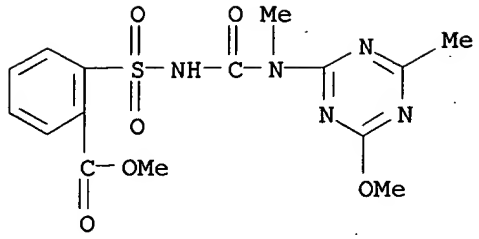
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 101200-48-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



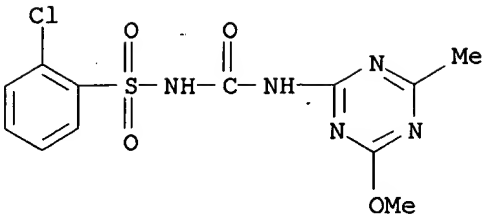
L39 ANSWER 61 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:185445 HCAPLUS
DOCUMENT NUMBER: 118:185445
TITLE: Sweet cherry (Prunus avium) response to simulated drift from selected herbicides
AUTHOR(S): Al-Khatib, Kassim; Parker, Robert; Fuerst, E. Patrick
CORPORATE SOURCE: N. W. Res. Ext. Cent., Washington State Univ., Mt. Vernon, WA, 98273, USA
SOURCE: Weed Technology (**1992**), 6(4), 975-9
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This study evaluated the response of sweet cherry to different herbicides applied at rates simulating drift. Chlorsulfuron, thifensulfuron, bromoxynil, 2,4-D, glyphosate, and a combination of 2,4-D and glyphosate were applied on one side of one- and two-year-old established cherry trees at 1/3, 1/10, 1/33, and 1/100 of the max. rate for small grain prodn. The order of herbicide phytotoxicity was chlorsulfuron > 2,4-D > glyphosate > 2,4-D + glyphosate > thifensulfuron > bromoxynil. Trees recovered from injury caused by all treatments except higher rates of chlorsulfuron, 2,4-D, and glyphosate. The herbicides caused characteristic symptoms, but some resembled disease, mineral deficiency, and environmental stress symptoms. Therefore, any allegations about herbicide drift based on chronic symptoms should be supported by anal. of plant tissue.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (toxicity of, to sweet cherry)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

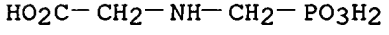
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



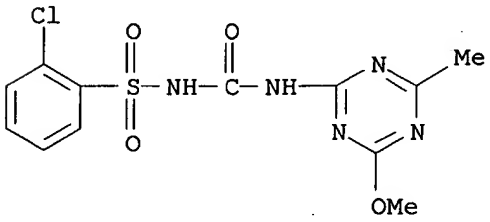
L39 ANSWER 62 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:185444 HCAPLUS
DOCUMENT NUMBER: 118:185444
TITLE: Alfalfa (Medicago sativa) response to simulated herbicide spray drift
AUTHOR(S): Al-Khatib, Kassim; Parker, Robert; Fuerst, E. Patrick
CORPORATE SOURCE: Washington State Univ., Mt. Vernon, WA, 98273, USA
SOURCE: Weed Technology (**1992**), 6(4), 956-60
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

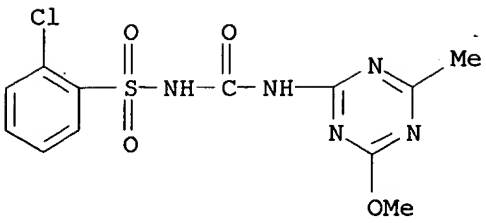
AB Vernal alfalfa response was evaluated when chlorsulfuron, thifensulfuron, 2,4-D, glyphosate, bromoxynil, and selected combinations of those herbicides were applied at rates simulating spray drift during the fourth trifoliolate leaf stage following the first cutting in 1990 and 1991. The order of phytotoxicity was 2,4-D > chlorsulfuron > thifensulfuron > glyphosate > bromoxynil. By the end of each growing season, alfalfa had recovered from injury caused by all herbicides except the highest rates of 2,4-D and 2,4-D plus glyphosate. The alfalfa stand was reduced only by 2,4-D and 2,4-D plus glyphosate. All herbicides caused characteristic symptoms, but some specific symptoms were similar among different herbicides or resembled symptoms caused by disease, mineral imbalance, and adverse weather conditions.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (toxicity of, to alfalfa)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

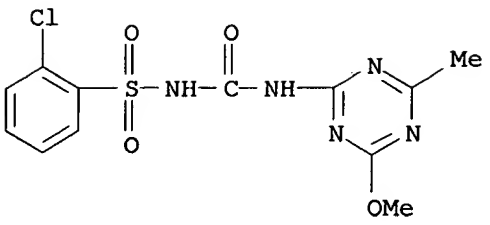




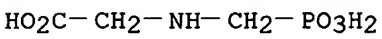
L39 ANSWER 63 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:168232 HCAPLUS
DOCUMENT NUMBER: 118:168232
TITLE: Use of heterotrophic and cyanobacterial nitrogen fixation to study the impact of anthropogenic substances on soil biological processes
AUTHOR(S): Maartensson, Anna M.
CORPORATE SOURCE: Div. Plant Nutr., Dep. Soil Sci., Uppsala, S-750 07, Swed.
SOURCE: Bulletin of Environmental Contamination and Toxicology (**1993**), 50(3), 466-73
CODEN: BECTA6; ISSN: 0007-4861
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The use of free-living heterotrophic diazotrophic soil microorganisms and soil surface-colonizing cyanobacteria to det. the impact of anthropogenic substances in soil is reported. The highest levels of free-living biol. nitrogen fixation (BNF) and cyanobacterial nitrogen fixation, as measured by acetylene redn. assay (ARA), were obtained in soil fertilized with calcium cyanamide. ARA was correlated with soil pH, but was independent of soil C or N. Cu, Ni, and Zn addn. caused significant decreases in heterotrophic BNF. The adverse effects of Cu and Zn were independent of soil pH, whereas the Ni effect increased with decreasing soil pH. The effects of the fungicides benomyl and mancozeb and the herbicides chlorsulfuron, 2,4-D, and glyphosate on free-living BNF and cyanobacterial nitrogen fixation were examd. The agrochems. inhibited nitrogen fixation in all cases, but significant differences were found among the individual herbicides and fungicides. Decreasing soil pH appeared to enhance the adverse effects of the agrochems. and Ni on nitrogen fixation in soil, whereas other soil properties, such as C and N content, had minimal influences. Pesticide concns. must exceed recommended concns. before neg. effects occur; however, heavy metals must be closely monitored since adverse effects occur at levels below or close to recommended crit. values. In general, the heterotrophic nitrogen fixation (BNF) was affected at lower concns. of the studied anthropogenic substances than the cyanobacteria.

IT **64902-72-3 1071-83-6**, Glyphosate
RL: ANST (Analytical study)
(soil contamination by, nitrogen fixation by soil microorganisms as assay for)
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

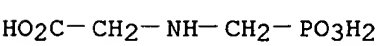


L39 ANSWER 64 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:163131 HCAPLUS
DOCUMENT NUMBER: 118:163131
TITLE: Seed germination, physical and chemical control of catclaw mimosa (Mimosa pigra var. pigra)
AUTHOR(S): Creager, R. A.
CORPORATE SOURCE: U.S. Dep. Agric., Frederick, MD, 21702, USA
SOURCE: Weed Technology (**1992**), 6(4), 884-91
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

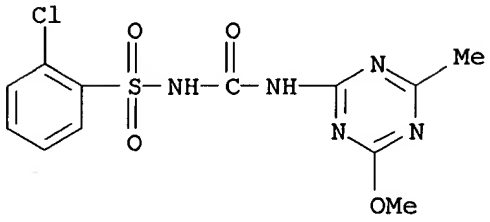
AB Catclaw mimosa, an exotic member of the Leguminosae, occurs in three areas of Florida. Propagation is by seed only. Seeds collected from Florida were used for germination, growth, and herbicide evaluation studies. Seeds germinated at 75-94%, but were not influenced by different environmental conditions under which they were stored. Greenhouse-grown plants cut or burned off at ground level failed to regrow. However, plants cut at .gtoreq.2 cm above ground level regrew from lateral shoots. Sixteen herbicides were evaluated to det. their effects on 6-8-wk-old plants grown in the greenhouse. Catclaw mimosa was killed by picloram, tebuthiuron, hexazinone and sulfometuron at 0.4, 0.07, 0.14, and 0.56 kg ha-1, resp. Dicamba at 1.12, triclopyr at 1.12 (Garlon 3A and 4), linuron at 4.48, and glyphosate at 8.96 kg ha-1 were also effective. Chlorsulfuron and metsulfuron killed 9 out of 10 plants at the highest rates tested. Four herbicides, imazapyr, thifensulfuron, DPX-L5300, and atrazine killed .ltoreq.50% of the plants at the highest rates of each compd. tested. Fosamine did not kill catclaw minosa at the rates tested.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
74223-56-6, Sulfometuron **79510-48-8**, Metsulfuron
101200-48-0, DPX-L5300
RL: BIOL (Biological study)
(catclaw mimosa control by)

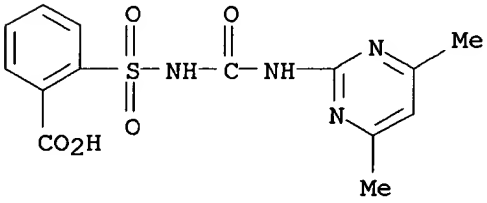
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



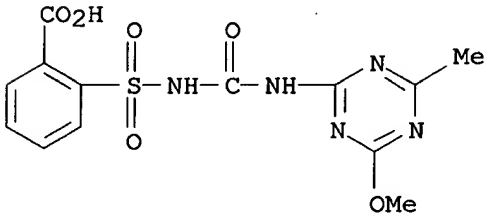
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



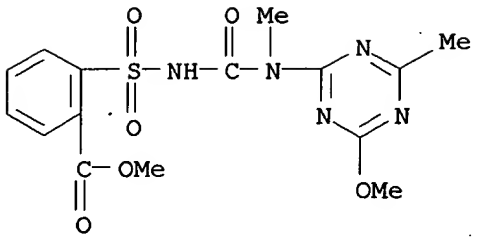
RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 101200-48-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 65 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:54340 HCAPLUS
DOCUMENT NUMBER: 118:54340
TITLE: Enhancement of the activity of herbicide sprays with polymers
INVENTOR(S): Chamberlain, Peter
PATENT ASSIGNEE(S): Allied Colloids Ltd., UK
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 506313	A1	19920930	EP 1992-302455	19920320	<--
EP 506313	B1	19990602			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE					
AT 180625	E	19990615	AT 1992-302455	19920320	
ES 2132107	T3	19990816	ES 1992-302455	19920320	
AU 9213124	A1	19921001	AU 1992-13124	19920324	<--
AU 661989	B2	19950817			
NO 9201171	A	19920928	NO 1992-1171	19920325	<--
CA 2064157	AA	19920927	CA 1992-2064157	19920326	<--
CA 2064157	C	20010612			
ZA 9202211	A	19930326	ZA 1992-2211	19920326	<--

PRIORITY APPLN. INFO.: GB 1991-6409 A 19910326

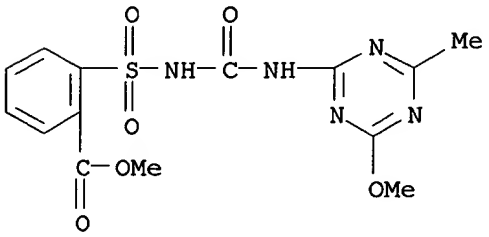
AB The systemic activity of foliar herbicides is improved by incorporating a water-sol. polymer. The polymer has a mol. wt. sufficiently low that its presence does not affect the spray pattern of the compn. The polymer can initially be supplied as an aq. soln. having 1 to 25% concn. When the active ingredient is water-sol., for instance glyphosate, a conc. comprises an aq. soln. of the active ingredient and the polymer. A 12.5% aq. nonionic polyacrylamide soln. was added to a glyphosate spray formulation, at a final 0.025% polymer concn. The compn., applied at 375 g glyphosate/ha cause 85% kill of winter barley, vs. 40% in the absence of polyacrylamide.

IT **1071-83-6 74223-64-6**, Metsulfuron-methyl
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(enhancement of activity of, by polymers, in foliar sprays)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

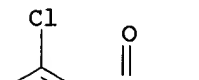


L39 ANSWER 66 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:586606 HCAPLUS
DOCUMENT NUMBER: 117:186606
TITLE: Heterotrophic plant cell suspension cultures for monitoring biological activity in agrochemical research. Comparison with screens using algae, germinating seeds and whole plants
AUTHOR(S): Grossmann, Klaus; Berghaus, Rainer; Retzlaff, Guenter
CORPORATE SOURCE: BASF Agric. Res. Stn., Limburgerhof, D-6703, Germany
SOURCE: Pesticide Science (**1992**), 35(3), 283-9
CODEN: PSSCBG; ISSN: 0031-613X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Heterotrophically cultured cell suspensions are used increasingly in agrochem. research for screening plant-growth retardants and herbicides which influence plant meristems. For this purpose, a large-scale microscreen has been devised, which permits the objective monitoring of cell division by measuring the cond. in cell suspensions cultured in test tubes. Comparing the effects of a wide spectrum of growth retardants and herbicides with different primary modes of action, the test was most sensitive to nitrogen-heterocyclic retardants in wheat-cell suspensions and to sulfonylurea > imidazolinone > cyclohexanedione, oxyphenoxypropionic acid, nitrile > glufosinate, phenoxy acid, bipyridylium and di-Ph ether herbicides in maize and oilseed rape cell cultures. Inhibitors of photosynthetic processes were only slightly active. The results of the tests were compared with the effects of the compds. on germinating seeds of cress (Lepidium sativum) and on photoautotrophic systems using algal cell suspensions (Scenedesmus acutus) and duckweeds (Lemma paucicostata). Heterotrophic cell suspensions, in combination with the series of biotests mentioned above, are a valuable complement to the whole-plant screens used routinely in industrial labs. They are particularly useful for identifying compds. whose biol. activity is masked by limited penetration or translocation behavior in whole plants.

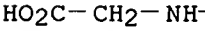
IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(monitoring of biol. activity of, heterotrophic plant cell suspension cultures for)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



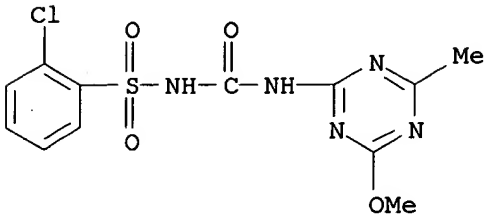
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

L39 ANSWER 67 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:506271 HCAPLUS
DOCUMENT NUMBER: 117:106271
TITLE: Phytotoxic effects, regrowth, and 14C-sucrose translocation in Canada thistle treated with mefluidide, flurprimidol, and systemic herbicides
AUTHOR(S): Tworkoski, T. J.; Sterrett, J. P.
CORPORATE SOURCE: Foreign Dis.-Weed Sci. Res., Agric. Res. Serv., Frederick, MD, 21702, USA
SOURCE: Journal of Plant Growth Regulation (**1992**), 11(2), 105-11
CODEN: JPGRDI; ISSN: 0721-7595
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Foliar applications of the plant growth regulators (PGRs) flurprimidol and mefluidide suppressed shoot elongation and regrowth and enhanced shoot injury caused by selected herbicides in Canada thistle (Cirsium arvense). Flurprimidol stimulated movement of [14C]sucrose from leaves to roots. However, the stimulation was nullified when glyphosate, chlorsulfuron, or clopyralid was applied to foliage 1 wk after application of the PGR. Herbicide-induced root injury was not enhanced by PGR application but these PGRs may be useful in decreasing weed competition among crops not similarly inhibited.
IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(Cadada thistle response to flurprimidol or mefluidide and)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

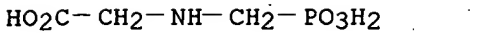


L39 ANSWER 68 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:506230 HCAPLUS
DOCUMENT NUMBER: 117:106230
TITLE: Tank-mix combinations for weed control in stale seedbed soybean (Glycine max)
AUTHOR(S): Bruff, Stacey A.; Shaw, David R.
CORPORATE SOURCE: Dep. Plant Pathol. Weed Sci., Mississippi State Univ., Mississippi State, MS, 39762, USA
SOURCE: Weed Technology (**1992**), 6(1), 45-51
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

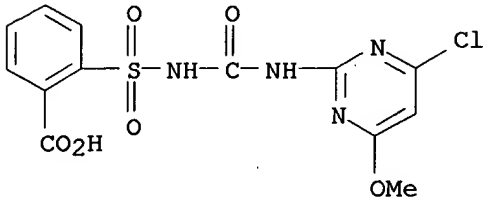
AB Field expts. were established in 1989 and 1990 on silty clay and sandy loam soils to evaluate selective herbicides in combination with non-selective weed control measures in conventional and stale seedbed soybean prodn. Metribuzin preemergence followed by chlorimuron postemergence controlled sicklepod better with paraquat than with glyphosate. A postemergence application of imazaquin increased sicklepod and pitted morning glory control by imazaquin preemergence alone in a stale seedbed or tillage program. Pitted morning glory control with imazaquin preemergence was lower with tillage than with glyphosate or paraquat combinations in a stale seedbed program. All metribuzin plus chlorimuron preemergence treatments, whether conventional tillage or stale seedbed, controlled pitted morning glory >75%. Hemp sesbania control was >80% with all metribuzin followed by chlorimuron or metribuzin plus chlorimuron preemergence combinations, and <70% with all treatments contg. imazaquin. Selective herbicides increased yield in stale seedbed when glyphosate or paraquat was added. Imazaquin preemergence, imazaquin preemergence followed by imazaquin postemergence, and metribuzin preemergence followed by chlorimuron postemergence tank mixed with glyphosate or paraquat in a stale seedbed program increased yield compared with the same treatments used with tillage.

IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
123385-65-9 142275-97-6 142275-99-8
142276-01-5
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(weed control by, in soybean)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



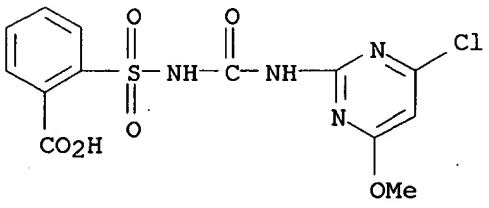
RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 123385-65-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one (9CI) (CA INDEX NAME)

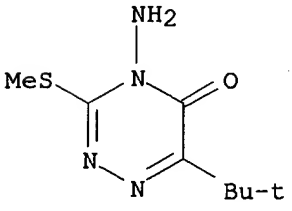
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S

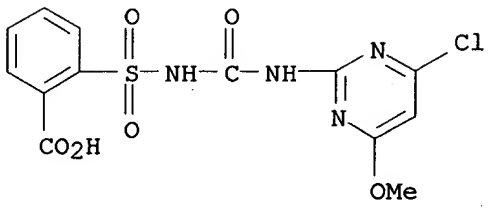


RN 142275-97-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX

NAME)

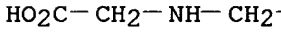
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

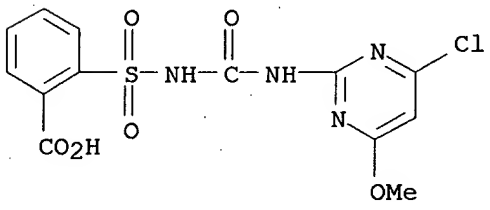
CRN 1071-83-6
CMF C3 H8 N O5 P



RN 142275-99-8 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]benzoic acid and 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-quinolinecarboxylic acid (9CI) (CA INDEX NAME)

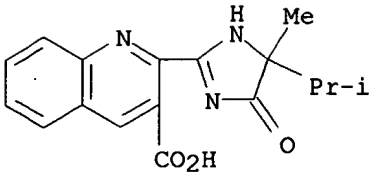
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

CRN 81335-37-7
CMF C17 H17 N3 O3



CM 3

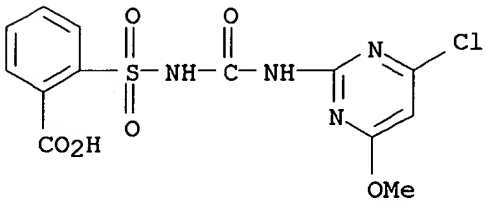
CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 142276-01-5 HCAPLUS
CN 4,4'-Bipyridinium, 1,1'-dimethyl-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one and 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

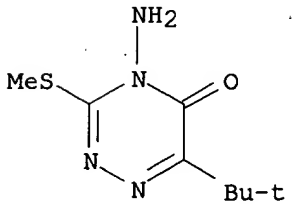
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



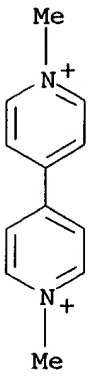
CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S



CM 3

CRN 4685-14-7
CMF C12 H14 N2

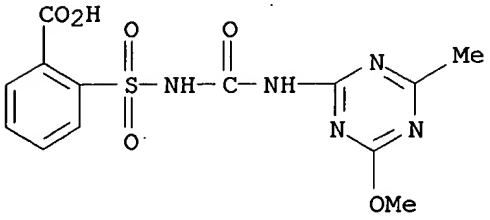


L39 ANSWER 69 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:485205 HCAPLUS
DOCUMENT NUMBER: 117:85205
TITLE: Timing of herbicide applications for control of larkspurs (Delphinium spp.)
AUTHOR(S): Ralphs, Michael H.; Evans, John O.; Dewey, Steven A.
CORPORATE SOURCE: Poisonous Plant Res. Lab., Agric. Res. Serv., Logan, UT, 84321, USA
SOURCE: Weed Science (**1992**), 40(2), 264-9
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Timing and application rates of herbicides were evaluated for control of duncecap and tall larkspur on mountain rangelands. Picloram, triclopyr, glyphosate, and metsulfuron were applied at 3 rates during 3 growth stages (vegetative, bud, and flower) to evaluate the rate by growth stage interaction. Picloram was equally effective over all growth stages when applied at 1.1 or 2.2 kg/ha. Metsulfuron was most effective when applied in the vegetative stage; 0.035 kg/ha killed 95% of duncecap larkspur, but 0.14 kg/ha was required to kill the same percentage of tall larkspur. Glyphosate at .ltoreq.2.2 kg/ ha was least effective when applied in the flower stage compared to earlier growth stages. Triclopyr showed variable control at rates from 1.1 to 4.5 kg/ha.
IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(larkspurs control by, application rates and timing effect on efficiency of)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-

yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 70 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:484935 HCAPLUS
DOCUMENT NUMBER: 117:84935
TITLE: Foliar absorption and translocation of herbicides from aqueous solution and treated soil
AUTHOR(S): Al-Khatib, Kassim; Parker, Robert; Fuerst, E. Patrick
CORPORATE SOURCE: Irrig. Agric. Res. Ext. Cent., Washington State Univ., Prosser, WA, 99350, USA
SOURCE: Weed Science (**1992**), 40(2), 281-7
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

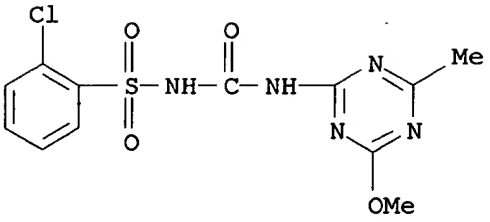
AB It has been suggested that soil treated with a herbicide and subsequently carried by wind and deposited on plant foliage can cause crop injury. This study compared foliar uptake and translocation of herbicides applied to plants as an aq. soln. or in herbicide-treated soil. Leaves of 3-wk-old seedling alfalfa, grape, and pea were treated with 14C-labeled thifensulfuron, chlorsulfuron, glyphosate, 2,4-D, and bromoxynil. Significant amts. of all herbicides were absorbed by pea, alfalfa, and grape from the aq. solns., whereas very limited absorption occurred from herbicide-treated soil. Prolonged and multiple exposure to herbicide-treated soil did not increase herbicide uptake. High relative humidity enhanced herbicide absorption from aq. solns. but not from herbicide-treated soil. All herbicides except bromoxynil were readily translocated in alfalfa, grape, and pea. Limited quantities of herbicides were absorbed from herbicide-treated soil by plant foliage, and this small amt. is unlikely to cause crop damage.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(aerosol and soil-particulate drift of, crop uptake and translocation of)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



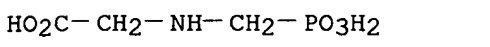
L39 ANSWER 71 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:484918 HCAPLUS
DOCUMENT NUMBER: 117:84918
TITLE: Effects of agrochemicals and heavy metals on fast-growing rhizobia and their symbiosis with small-seeded legumes
AUTHOR(S): Martensson, A. M.
CORPORATE SOURCE: Dep. Soil Sci., Swedish Univ., Uppsala, S-750 07, Swed.
SOURCE: Soil Biology & Biochemistry (**1992**), 24(5), 435-45
CODEN: SBIOAH; ISSN: 0038-0717
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of potentially hazardous agrochems. including fungicides, herbicides, and heavy metals on symbiotic nitrogen fixation were investigated. The substances were tested with eight rhizobial strains from three cross-inoculation groups: Rhizobium leguminosarum b.v. trifolii, R. meliloti, and R. loti in pure culture studies. Bacteria were obtained from a culture collection or from soils. Sensitivity of the bacteria to the agrochems. and heavy metals varied. None of the bacteria were tolerant to all chems. No difference in tolerance between cross-inoculation groups existed. Bacteria were able to multiply at concns. of agrochems. equal to or higher than recommended field-application rates. Heavy metals concns. that severely inhibited growth were far lower than the highest amts. allowed under the current Commission of the European Communities' guidelines for environmental protection. Bacterial growth in the presence of the agrochems. and heavy metals, apart from glyphosate and zinc, did not influence nodulation ability of the strains. Development of uninoculated plants was inhibited at increasing concns. of all compds., red clover being most sensitive. Herbicides were most harmful, with injuries occurring at levels 1/10-1/10,000 of recommended applied concns. Uninoculated plants were tolerant to agrochems., but were more tolerant to heavy metals compared to the bacteria. Root hair deformations similar to bacterial-induced root hair deformations were induced by bentazone, chlorsulphuron, and monochlorophenoxyacetic acid on uninoculated plants. Symbiotic interactions were adversely affected by several of the agrochems. Bacterial-induced root hair deformations necessary for nodulation decreased in the presence of benomyl, bentazone, chlorsulphuron, fenpropimorph, mancozeb, and monochlorophenoxyacetic acid. Fenpropimorph and mancozeb did not cause root hair deformations at increasing concns., indicating that these may inhibit nodulation under field conditions. Nodule development was inhibited at increased levels of bentazone, chlorsulphuron, glyphosate, and mancozeb. Dry matter prodn. of nodulated plants were adversely affected by bentazone and chlorsulphuron, indicating

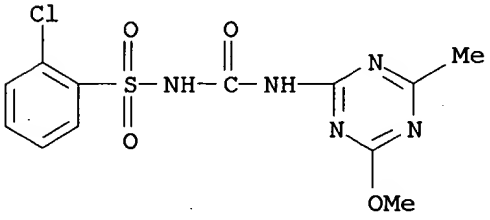
disturbances in nodule function.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (toxicity of, to Rhizobium and legumes, growth during, symbiosis in relation to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 72 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:442748 HCAPLUS
DOCUMENT NUMBER: 117:42748
TITLE: Herbicidal combinations of microbial fermentation products and chemical agents
INVENTOR(S): Carlson, Peter S.; Herbst, Kathleen; Kostka, Stanley J.
PATENT ASSIGNEE(S): Crop Genetics International Corp., USA
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

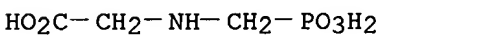
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9208357	A1	19920529	WO 1991-US8312	19911114 <--
W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MC, MG, MN, MW, NO, PL, RO, SD, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
CA 2096344	AA	19920517	CA 1991-2096344	19911114 <--
AU 9190558	A1	19920611	AU 1991-90558	19911114 <--
EP 557431	A1	19930901	EP 1992-900735	19911114 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06503088	T2	19940407	JP 1992-501895	19911114 <--
CN 1062265	A	19920701	CN 1991-111519	19911115 <--
ZA 9109060	A	19921125	ZA 1991-9060	19911115 <--

PRIORITY APPLN. INFO.: US 1990-614118 19901116
WO 1991-US8312 19911114

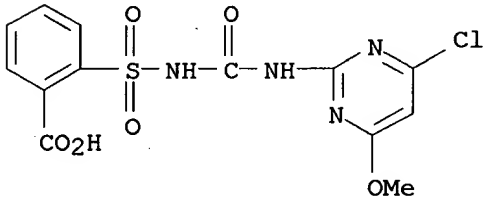
AB The activity of herbicides (sulfosate, glufosinate, glyphosate, fluazifop, etc.) is enhanced by culture media in which Pseudomonas, Xanthomonas, Azospirillum, and other microorganisms were grown. The control of barnyard grass, fall panicum, Johnson grass, and other weeds by 0.125 lb glyphosate/acre was enhanced by addn. to glyphosate of a medium in which a phytopathogenic strain of Pseudomonas syringae tabaci was cultured.

IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(enhancement of herbicidal activity of, by microorganism growth-conditioned culture media)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 73 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:250516 HCAPLUS
DOCUMENT NUMBER: 116:250516
TITLE: Enhancement of herbicidal activity by surfactants
INVENTOR(S): Bieringer, Hermann; Hacker, Erwin; Heinrich, Rudolf; Huff, Hans Philipp; Kocur, Jean
PATENT ASSIGNEE(S): Hoechst A.-G., Germany
SOURCE: Ger. Offen., 15 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
DE 4029304	A1	19920319	DE 1990-4029304	19900915	<--
JP 04230608	A2	19920819	JP 1991-233481	19910912	<--
CA 2051346	AA	19920316	CA 1991-2051346	19910913	<--
CA 2051346	C	20020625			
AU 9183863	A1	19920319	AU 1991-83863	19910913	<--
AU 656735	B2	19950216			

HU 58972	A2	19920428	HU 1991-2956	19910913 <--
ZA 9107266	A	19920429	ZA 1991-7266	19910913 <--
BR 9103949	A	19920526	BR 1991-3949	19910913 <--
IL 99477	A1	19960618	IL 1991-99477	19910913 <--
US 6159900	A	20001212	US 1991-759478	19910913
EP 476555	A2	19920325	EP 1991-115631	19910914 <--
EP 476555	A3	19930113		
EP 476555	B1	19981209		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
EP 850565	A1	19980701	EP 1998-103590	19910914
EP 850565	B1	20021127		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
AT 174187	E	19981215	AT 1991-115631	19910914
ES 2125858	T3	19990316	ES 1991-115631	19910914
AT 228299	E	20021215	AT 1998-103590	19910914

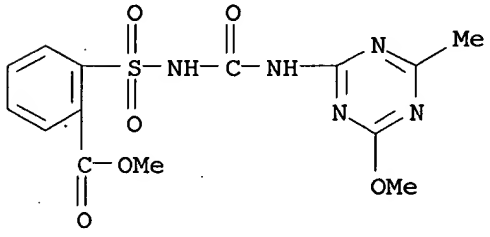
PRIORITY APPLN. INFO.: DE 1990-4029304 A 19900915
EP 1991-115631 A3 19910914

AB C10-18 alkylpolyglycol ether sulfate surfactants enhance the activity of herbicides. Almost total control of Abutilon theophrasti and Sesbania exaltata was shown by 20 g pirimisulfuron + 280 g Genapol LRO/ha, whereas pirimisulfuron by itself was much less active.

IT **74223-64-6**, Metsulfuron methyl **86209-51-0**, Primisulfuron-methyl
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, enhancement of, with alkylpolyglycol ether sulfate surfactants)

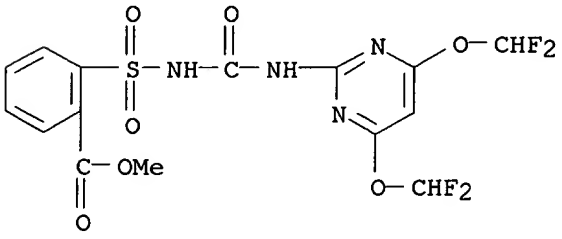
RN 74223-64-6 HCAPLUS

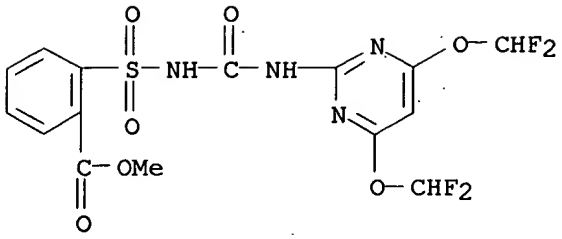
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



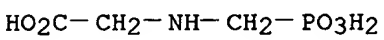
RN 86209-51-0 HCAPLUS

CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

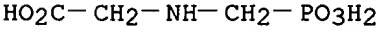




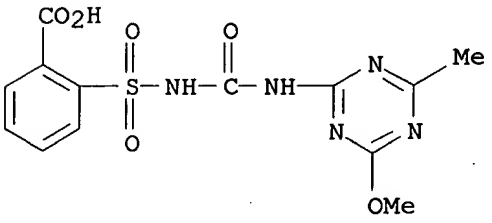
IT **1071-83-6**, Glyphosate
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, enhancement of, with alkylpolyglycol ether surfate surfactants)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L39 ANSWER 74 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:250441 HCAPLUS
DOCUMENT NUMBER: 116:250441
TITLE: Chemical control of wilding conifer seedlings
AUTHOR(S): Crozier, E. R.
CORPORATE SOURCE: For. Res. Inst., Christchurch, N. Z.
SOURCE: Proceedings of the New Zealand Weed and Pest Control Conference (**1990**), 43, 182-6
CODEN: PZWPAL; ISSN: 0370-2804
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Five herbicides were applied in both summer and winter to 7 commonly occurring wilding conifer species to det. the most effective chem. and season for controlling unwanted wilding seedlings. Conifer mortalities were higher when herbicides were applied in the summer than in winter. Glyphosate, metsulfuron, and picloram killed Corsican, lodgepole, ponderosa, radiata, and Scots pine, Douglas fir, and European larch seedlings when applied in the summer. Triclopyr applied in the summer killed only European larch seedlings, and 2,4-D was ineffective at the concn. tested. Winter spraying of glyphosate killed conifer species except European larch, but metsulfuron was ineffective on all species except Douglas fir. Triclopyr and 2,4-D were ineffective on all species treated in winter.
IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(conifer seedling control by)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

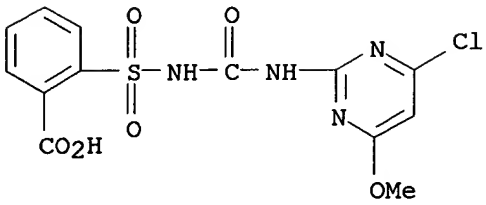


L39 ANSWER 75 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:250420 HCAPLUS
DOCUMENT NUMBER: 116:250420
TITLE: Early season herbicide applications for weed control in stale seedbed soybean (Glycine max)
AUTHOR(S): Bruff, Stacey A.; Shaw, David R.
CORPORATE SOURCE: Dep. Plant Pathol. Weed Sci., Mississippi State Univ., Mississippi, MS, 39762, USA
SOURCE: Weed Technology (**1992**), 6(1), 36-44
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Field expts. were conducted in 1989 and 1990 on silty clay and sandy loam soils to evaluate weed control and soybean yield with early-Apr. preplant incorporation of selective herbicides in stale seedbed soybean followed by nonselective weed control measures at planting. Metribuzin applied preplant incorporated (PPI) early followed by chlorimuron post emergence coupled with either glyphosate or paraquat premergence controlled sicklepod, pitted morning glory, and hemp sesbania to the same extent of that treatment applied PPI at planting. All stale seedbed treatments with post emergence applications and glyphosate, paraquat, or tillage at planting controlled pitted moring glory over 70%. However, imazaquin or metribuzin applied PPI early without a postemergence treatment controlled sicklepod and pitted moring glory poorly. Frequently, applying PPI herbicides at planting increased control compared with early PPI applications, but this was overcome by postemergence treatments. Early stale seedbed applications of metribuzin did not result in more than 60% control of hemp sesbania, whereas metribuzin applied PPI at planting controlled over 85%. However, metribuzin plus chlorimuron controlled hemp sesbania at least 74%, regardless of application timing or tillage method, whereas no imazaquin treatment achieved over 65% control. All stale seedbed herbicide treatments increased soybean yield compared with the untreated stale seedbed check. Selective herbicide treatments with either non-selective herbicide in a stale seedbed program resulted in equiv. yield to PPI at planting treatments most often, except with metribuzin.

IT **99283-00-8**, Chlorimuron **123385-65-9**,
Chlorimuron-metribuzin mixt.
RL: BIOL (Biological study)
(weed control by glyphosate or paraquat and, in soybeans)
RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino

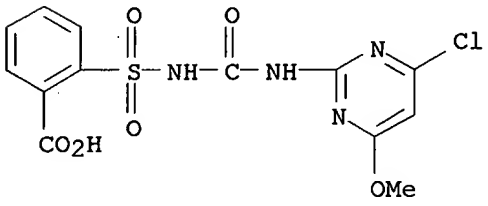
]sulfonyl]- (9CI) (CA INDEX NAME)



RN 123385-65-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one (9CI) (CA INDEX NAME)

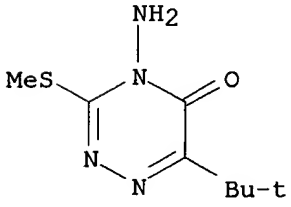
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S

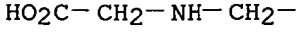


CM 2

CRN 21087-64-9
CMF C8 H14 N4 O S



IT **1071-83-6,** Glyphosate
RL: BIOL (Biological study)
(weed control by selective herbicides and, in soybeans)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

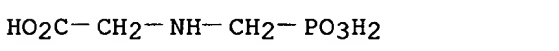


L39 ANSWER 76 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:2254 HCAPLUS
DOCUMENT NUMBER: 116:2254
TITLE: Absorption, translocation, and activity of CGA-136872, DPX-V9360, and glyphosate in rhizome johnsongrass (Sorghum halepense)
AUTHOR(S): Camacho, Rolando F.; Moshier, Loren J.
CORPORATE SOURCE: Dep. Agron., Kansas State Univ., Manhattan, KS, 66502, USA
SOURCE: Weed Science (**1991**), 39(3), 354-7
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

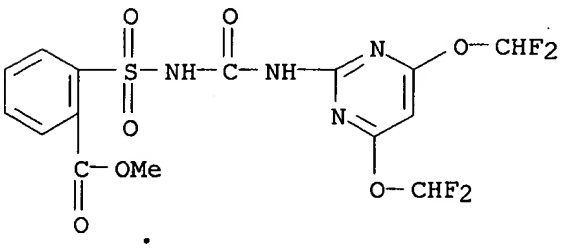
AB Rhizome johnson grass grown in the greenhouse and treated with glyphosate at 1680 g ha-1 at an early (3- to 4-leaf) or late (6- to 8-leaf) growth stage displayed injury within a week. Plants treated with CGA-136872 or DPX-V9360 at 40 g ha-1 at both growth stages displayed injury 1 to 2 wk later. CGA-136872 did not prevent regrowth at either growth stage. No regrowth occurred from DPX-V9360 or glyphosate-treated plants. Foliar absorption by greenhouse-grown plants within 24 h of application was greater with 14C-glyphosate than with 14C-DPX-V9360 or 14C-CGA-136872. More 14C-DPX-V9360 was absorbed that 14C-CGA-136872. Growth stage influenced glyphosate absorption (more by younger plants) but not CGA-136872 or DPX-V9360 absorption. Translocation of the 14C-CGA-136872 and 14C-DPX-V9360 out of the treated leaf was <20% of the absorbed label and was less than glyphosate translocation. Growth stage of rhizome johnson grass at the time of treatment had no effect on the distribution of radiolabeled herbicides within 24 h.

IT **1071-83-6**, Glyphosate **86209-51-0**, CGA-136872
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(absorption and translocation and activity of, in rhizome johnson grass)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 86209-51-0 HCAPLUS
CN Benzoic acid, 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

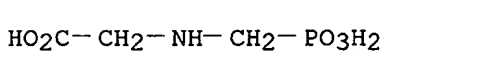


L39 ANSWER 77 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:601069 HCAPLUS
DOCUMENT NUMBER: 115:201069
TITLE: Response of selected forage grasses to herbicides
AUTHOR(S): Bovey, R. W.; Hussey, M. A.
CORPORATE SOURCE: South. Crops Res. Lab., ARS, USA
SOURCE: Agronomy Journal (**1991**), 83(4), 709-13
CODEN: AGJOAT; ISSN: 0002-1962
DOCUMENT TYPE: Journal
LANGUAGE: English

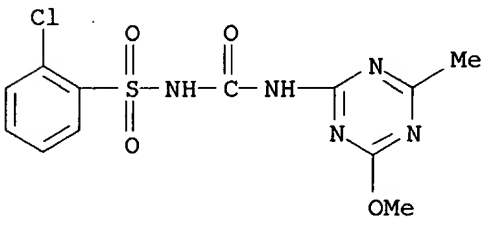
AB Early spring applications of herbicides were evaluated for weed control and phytotoxicity to kleingrass (Panicum coloratum) during establishment. In 1986, areas treated with MSMA (monosodium salt of methylarsonic acid) at 2.2 and 4.5 kg ha-1 or chlorsulfuron at 0.018 and 0.035 kg ha-1 reduced weed yield to <900 and increased kleingrass yield to >9300 kg ha-1. Untreated areas produced 5400 and 4300 kg ha-1 of weeds and kleingrass, resp. In 1988, kleingrass yields were increased only where weeds were removed by hand or MSMA. Bensulide, butylate, and sulfometuron were highly injurious to kleingrass. In 1989, no treatment increased kleingrass yields. In the greenhouse, Selection 75 kleingrass, common buffelgrass (Cenchrus ciliaris), WW-Spar and WW-Ironmaster old world bluestem (Bothriochloa ischaemum ischaemum), Bell rhodesgrass (Chloris gayana), Cowboy laurisiagrass (Pennisetum orientale), Haskel sideoats grama (Bouteloua curtipendula), Lometa Indiangrass (Sorghastrum nutans), Alamo switchgrass (Panicum virgatum), and Palar Wilman lovegrass (Eragrostis superba) were treated. Based on seedling wt., most grasses tolerated butylate, MSMA, 2,4-D, chlorsulfuron, and metsulfuron. Buffelgrass, Indiangrass, and old world bluestem tolerated sulfometuron. Atrazine and propazine were sometimes injurious, but bensulide and siduron were highly injurious to most grasses.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
74223-56-6, Sulfometuron **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(forage grasses response to)

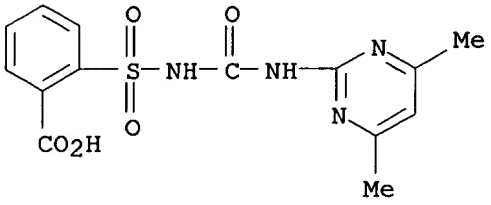
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



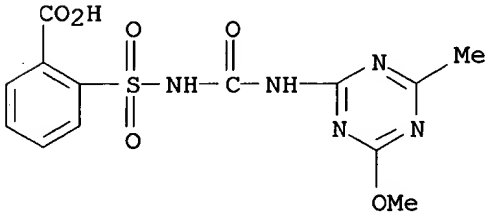
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



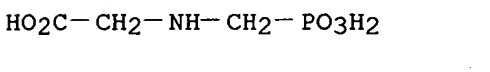
L39 ANSWER 78 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:529939 HCAPLUS
DOCUMENT NUMBER: 115:129939
TITLE: Response of yankeeweed (Eupatorium compositifolium) and associated pasture plants to herbicides
AUTHOR(S): Meyer, Robert E.; Bovey, Rodney W.
CORPORATE SOURCE: Dep. Range Sci., Texas A and M Univ., College Station, TX, 77843, USA
SOURCE: Weed Technology (**1991**), 5(1), 214-17
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Eleven herbicides applied in May, were evaluated for yankeeweed control in East-Central Texas. Yankeeweed cover 1 yr later was reduced to .ltoreq.5% by 0.28 kg/ha of picloram, 0.56 kg/ha of clopyralid, glyphosate, or dicamba, 0.28 + 0.84 kg/ha of dicamba + 2,4-D, and 1.1 kg/ha triclopyr compared with 30% cover in the untreated area. Chlorsulfuron and metsulfuron at 0.07 kg/ha reduced yankeeweed cover to 12 and 7%, resp. Dalapon, 2,4-D, and tebuthiuron were relatively ineffective. Most herbicides, reduced woolly croton cover within 1 mo after treatment compared to the untreated areas, but 2,4-D at 0.28 kg/ha and chlorsulfuron at 0.02 kg/ha and 0.07 kg/ha were most effective after 4 mo. All herbicides, except dalapon at .ltoreq.1.1 kg/ha and most rates of 2,4-D and tebuthiuron, reduced partridgepea cover during the year of application. Total grass cover was increased 4 and 12 mo following treatment with clopyralid, picloram, dicamba, and triclopyr. On sep. sites, bahiagrass and coastal bermudagrass accounted for most of the

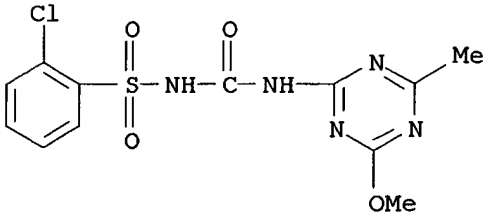
increased grass cover.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(yankeeweed and assocd. pasture plants response to)

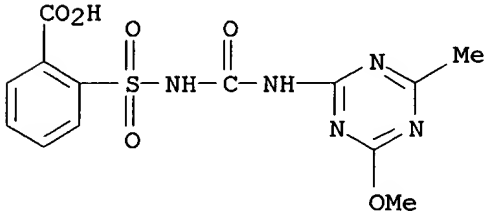
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 79 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:424370 HCAPLUS
DOCUMENT NUMBER: 115:24370
TITLE: Liquid herbicide formulation containing N-phosphonomethylglycine and diamine surfactant
INVENTOR(S): Darchy, Francois
PATENT ASSIGNEE(S): Rhone-Poulenc Agrochimie, Fr.
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

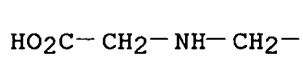
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
DE 4019362	A1	19910103	DE 1990-4019362	19900618	<--
FR 2648316	A1	19901221	FR 1989-8433	19890620	<--
CA 2019087	AA	19901220	CA 1990-2019087	19900615	<--
SE 9002166	A	19901221	SE 1990-2166	19900618	<--
DK 9001493	A	19901221	DK 1990-1493	19900619	<--
AU 9057565	A1	19910103	AU 1990-57565	19900619	<--
GB 2233229	A1	19910109	GB 1990-13692	19900620	<--
GB 2233229	B2	19920506			
NL 9001407	A	19910116	NL 1990-1407	19900620	<--
HU 54023	A2	19910128	HU 1990-3921	19900620	<--
JP 03034901	A2	19910214	JP 1990-162548	19900620	<--
ZA 9004785	A	19910424	ZA 1990-4785	19900620	<--
BR 9002986	A	19910820	BR 1990-2986	19900620	<--

PRIORITY APPLN. INFO.: FR 1989-8433 19890620
OTHER SOURCE(S): MARPAT 115:24370

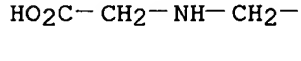
AB An aq. herbicide contains N-phosphonomethylglycine and/or .gtoreq.1 derivs. of glyphosate-equiv. (40 g), surfactant RN[(AO)nR1](CH2)3N[(AO)n'R1][(AO)n"R1] (I; R = C8-22-alkyl or -alkenyl; A = alkylene, preferably ethylene or propylene; R1 = H, acyl; n + n' + n" = 1-15) at a ratio 0.5-40% of herbicide/surfactant, ammonium salt (e.g. NH4NO3, NH4SCN, etc.), and another herbicide selected from acifluorfen, aclonifen, bifenox, etc. at certain wt. ratio. An aq. herbicide, esp. effective against Ipomoea, Portulaca, and Abutilon theophrasti, contained isopropylammonium N-phosphonomethylglycin 100, (NH4)2SO4 200, I (R = C18H35; R1 = H; n + n' + n" = 3) 100 g/L, and water to 1 L.

IT **1071-83-6**, Glyphosate **1071-83-6D**, derivs.
RL: BIOL (Biological study)
(aq. herbicide formulation contg.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

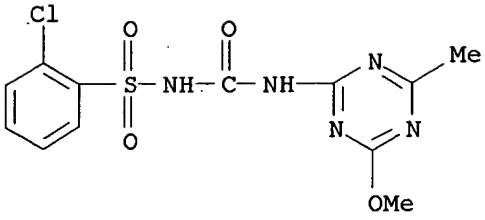


RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

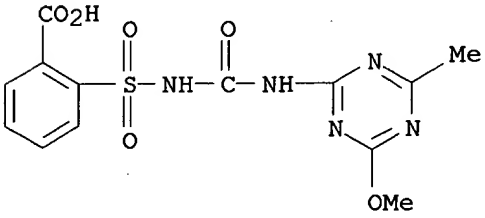


IT **64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicide, aq. phosphonomethylglycine formulation contg.)

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 80 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:403091 HCAPLUS
DOCUMENT NUMBER: 115:3091
TITLE: Woolly croton (Croton capitatus) and bitter sneezeweed (Helenium amarum) control in the Blackland prairie of Texas
AUTHOR(S): Bovey, Rodney W.; Meyer, Robert E.
CORPORATE SOURCE: Dep. Range Sci., Texas A and M Univ., College Station, TX, 77843, USA
SOURCE: Weed Technology (**1990**), 4(4), 862-5
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

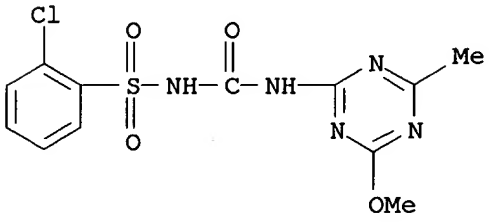
AB Field studies were conducted in 1984 and 1986 to identify herbicides that would control woolly croton and bitter sneezeweed on grazing land in the Blackland prairies of Texas. Herbicides included chlorosulfuron, clopyralid, dalapon, dicamba, 2,4-D, glyphosate, metsulfuron, picloram, tebuthiuron, 2,4,5-T, and triclopyr. Chlorosulfuron and metsulfuron applied at 0.018 kg ha-1 and 2,4-D, picloram, 2,4,5-T, and triclopyr at 0.28 kg ha-1 controlled >80% of the woolly croton. Metsulfuron controlled >90% of the bitter sneezeweed at 0.018 kg ha-1. Similar control was obtained with clopyralid, glyphosate, and picloram each at 0.28 kg ha-1. Bermudagrass cover increased with all herbicide treatments except dalapon at one of three sites.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
79510-48-8, Metsulfuron
RL: BIOL (Biological study)
(in control of bitter sneezeweed and woolly croton in Blackland prairie of Texas)

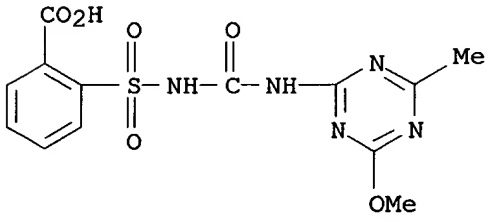
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 81 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:223529 HCAPLUS
DOCUMENT NUMBER: 114:223529
TITLE: Herbicidal wettable powders in water-soluble polymer pouches
INVENTOR(S): Darchy, Francois
PATENT ASSIGNEE(S): Rhone-Poulenc Agrochimie, Fr.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 387165	A1	19900912	EP 1990-420116	19900306 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
FR 2644036	A1	19900914	FR 1989-3207	19890307 <--
FR 2644036	B1	19920117		
CA 2011531	AA	19900907	CA 1990-2011531	19900306 <--

HU 54022	A2	19910128	HU 1990-1322	19900306 <--
AU 9050789	A1	19900920	AU 1990-50789	19900307 <--
AU 641141	B2	19930916		
JP 02289505	A2	19901129	JP 1990-56289	19900307 <--
BR 9001170	A	19910319	BR 1990-1170	19900307 <--
ZA 9001751	A	19910626	ZA 1990-1751	19900307 <--

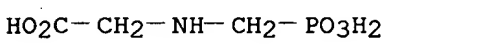
PRIORITY APPLN. INFO.: FR 1989-3207 19890307

AB Glyphosate or its salts, optionally blended with other herbicides, are formulated as wettable powders and packaged into pouches made of water-sol. polymers. When placed in water, the pouches generate herbicidal suspensions, without the need to discard environmentally polluting containers. A compn. comprised glyphosate Na salt 10, aclonifen 20, ethoxylated C8-18 alc. 10, (NH4)2SO4 25, Ca lignosulfonate 5, silica 20, and kaolin 10%. The compn. was packaged into PVA pouches.

IT **1071-83-6**, Glyphosate
RL: BIOL (Biological study)
(wettable powders comprising, in water-sol. polymer pouches)

RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

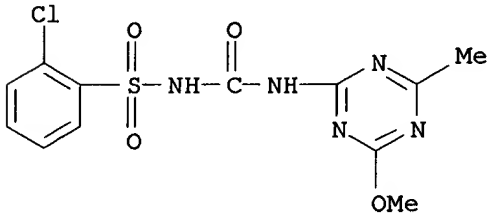


$HO_2C-CH_2-NH-CH_2-PO_3H_2$

IT **64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(wettable powders contg. glyphosate and, in water-sol. polymer pouches)

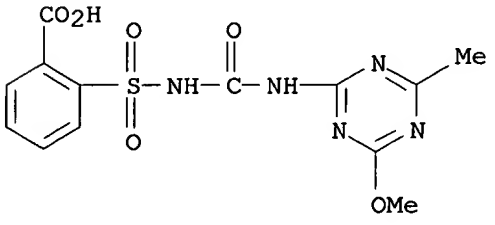
RN 64902-72-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS

CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

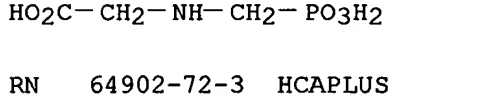


L39 ANSWER 82 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:223456 HCAPLUS
DOCUMENT NUMBER: 114:223456
TITLE: Profitable, effective herbicides for planting-time weed control in no-till spring wheat (Triticum aestivum)
AUTHOR(S): Donald, William W.; Prato, Tony
CORPORATE SOURCE: Agric. Res. Serv., Fargo, ND, 58105, USA
SOURCE: Weed Science (**1991**), 39(1), 83-90
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

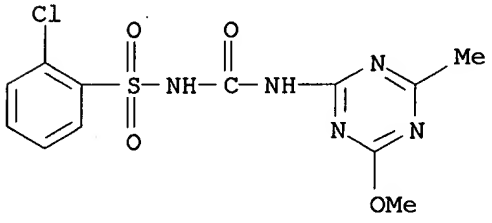
AB High herbicide costs and uncertainty about annual weed control at planting have limited adoption of no-till spring wheat prodn. systems in the northern Great Plains. Chlorsulfuron, metsulfuron, and CGA-131036 at 10-20 g ai ha-1 plus nonionic surfactant generally controlled both emerged kochia and wild mustard equally well (>80%) whether or not combined with glyphosate at 250 g ha-1 plus nonionic surfactant. In two of three trials persistent phytotoxic residues of these sulfonylurea herbicides in soil controlled both weeds better in midseason and early summer 1 yr after treatment than did glyphosate, which has only foliar activity. While the abs. net returns of different treatments varied among herbicides, relative net returns were insensitive to changes in either herbicide or wheat price. Herbicide use tended to boost net returns for no-till spring wheat in years with good weather but depressed net returns in a drought year. Chlorsulfuron at 10 and 20 g ha-1 increased net returns in all three trials. Metsulfuron and combinations of either metsulfuron or chlorsulfuron with glyphosate had variable effects on net returns.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron **82097-50-5**, CGA-131036 **110020-51-4**, Glyphosate-chlorsulfuron mixture **131755-59-4**, Glyphosate-metsulfuron mixture **133786-65-9**
RL: BIOL (Biological study)
(weed control by, in no-till spring wheat)

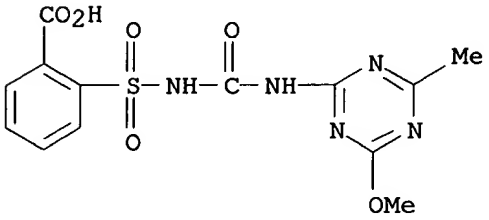
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



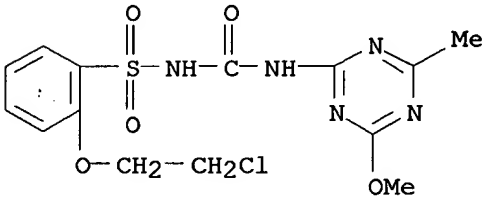
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



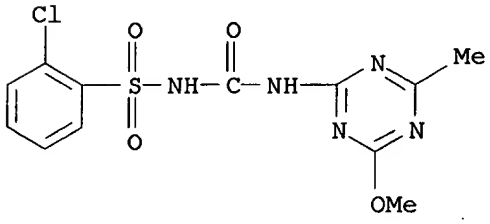
RN 82097-50-5 HCAPLUS
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 110020-51-4 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

CM 1

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S



CM 2

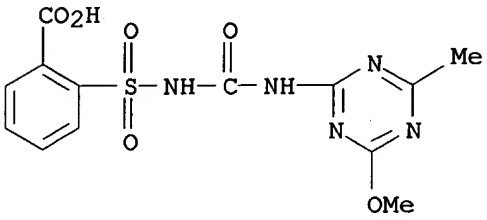
CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 131755-59-4 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 79510-48-8
CMF C13 H13 N5 O6 S



CM 2

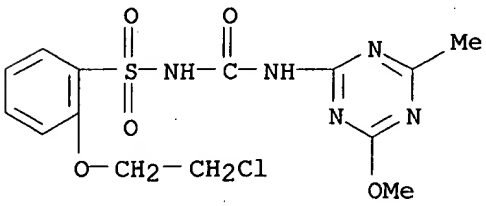
CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 133786-65-9 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

CM 1

CRN 82097-50-5
CMF C14 H16 Cl N5 O5 S



CM 2

CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

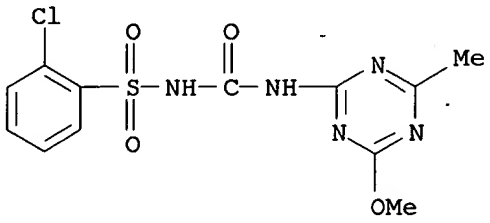
L39 ANSWER 83 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:201658 HCAPLUS
DOCUMENT NUMBER: 114:201658
TITLE: Orobanche ramosa L. (broomrape) control in tomato (Lycopersicon esculentum Mill.) with chlorsulfuron, glyphosate and imazaquin
AUTHOR(S): Kotoula-Syka, E.; Eleftherohorinos, I. G.
CORPORATE SOURCE: Plant Prot. Inst., Thessaloniki, 54110, Greece
SOURCE: Weed Research (**1991**), 31(1), 19-27
CODEN: WEREAT; ISSN: 0043-1737
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Chlorsulfuron, glyphosate and imazaquin were evaluated in pot and field studies for their efficacy in controlling broomrape (O. ramosa) in tomato (L. esculentum) in Northern Greece. All herbicides were applied four to five weeks after tomato transplanting, when the crop was at early flowering stage and broomrape had started to develop underground attachments. The no. of emerged broomrape shoots and underground attachments were less affected by herbicide treatments than the dry wt., suggesting that the herbicides suppress the growth of broomrape rather than kill its underground organs. In the pot expts., chlorsulfuron applied at 5 g ha-1 was the most effective treatment for broomrape control and the least toxic to the crop. Imazaquin and glyphosate applied at 37 and 180 g ha-1, resp., controlled broomrape but imazaquin reduced crop yield. In the field, similar rates of glyphosate and higher rates of imazaquin were not toxic to the crop but were less effective on broomrape. Chlorsulfuron applied at 10 g ha-1 controlled broomrape emergence by 88%. When the herbicide was applied twice (5 + 10 g ha-1), it gave complete control of broomrape but delayed crop maturity. The yield of tomato was not increased as a result of these treatments because of low broomrape infestation and a short competition period.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(broomrape control in tomato with)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 84 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:159150 HCAPLUS
DOCUMENT NUMBER: 114:159150
TITLE: Water-soluble herbicide powders or granules containing N-phosphonomethylglycine
INVENTOR(S): Kuchikata, Masuo; Prill, Erhard John; Richardson, Ronald Owen; Sato, Tatsuo; Surgant, John Melvin; Wright, Daniel Richard
PATENT ASSIGNEE(S): Monsanto Co., USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9007275	A1	19900712	WO 1989-US5793	19891221	<--
W: AU, BB, BG, BR, DK, FI, HU, JP, KR, LK, NO, RO, SD, SU					
RW: AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, SE					
EP 378985	A1	19900725	EP 1989-870207	19891221	<--
EP 378985	B1	19960626			
EP 378985	B2	20010124			
R: GR					
AU 9048333	A1	19900801	AU 1990-48333	19891221	<--
AU 635514	B2	19930325			
EP 452366	A1	19911023	EP 1990-901470	19891221	<--
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE					
JP 04502618	T2	19920514	JP 1990-501913	19891221	<--
AT 139670	E	19960715	AT 1989-870207	19891221	<--
ES 2088906	T3	19961001	ES 1989-870207	19891221	<--
JP 2938970	B2	19990825	JP 1989-501913	19891221	
CA 2006816	AA	19900630	CA 1989-2006816	19891228	<--
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CN 1044206	A	19900801	CN 1989-109841	19891228	<--
ZA 8909965	A	19911127	ZA 1989-9965	19891228	<--
US 5656572	A	19970812	US 1995-463844	19950605	<--
US 5872078	A	19990216	US 1997-898654	19970722	
US 6228807	B1	20010508	US 1997-899297	19970723	

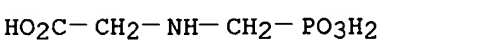
PRIORITY APPLN. INFO.:
US 1988-292499 A 19881230
WO 1989-US5793 A 19891221
US 1990-625516 A3 19901211
US 1995-557371 B1 19951113
US 1996-726538 B3 19961007

AB The title herbicide contains N-phosphonomethylglycine or its salt, a liq.

surfactant, a salt, other water-insol. co-herbicides, such as 2,4-D, dicamba, etc., and optionally a dispersing agent. The herbicides can be pan-dried, or spray-dried after granulation (>60 mesh). Thus, a compn. was formulated consisting of glyphosate 90.86 g and NH4HCO3 43.52 g.

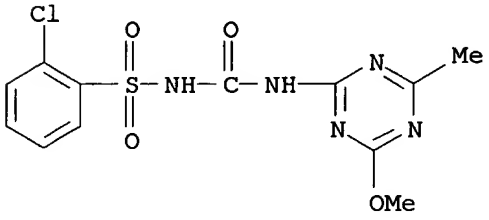
IT **1071-83-6**, Glyphosate
RL: BIOL (Biological study)
(powdery water-sol. herbicide compns. contg.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

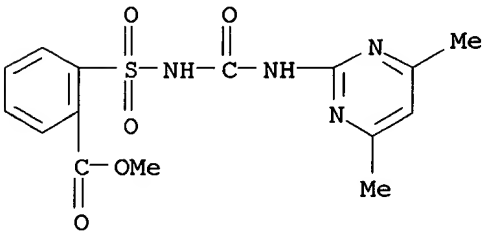


IT **64902-72-3**, Glean **74222-97-2**, Oust **74223-64-6**, Ally **90982-32-4**, Classic
RL: BIOL (Biological study)
(powdery water-sol. herbicide compns. contg. glyphosate and)

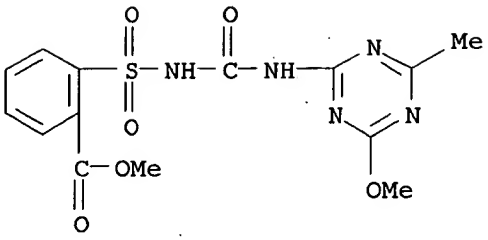
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



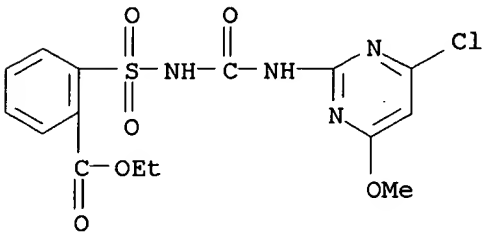
RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



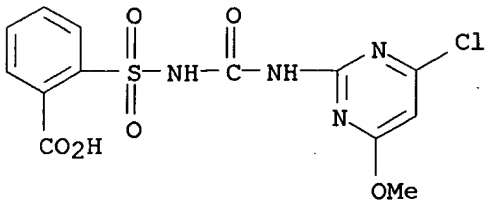
L39 ANSWER 85 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:137975 HCAPLUS
DOCUMENT NUMBER: 114:137975
TITLE: Yellow nutsedge control in landscape plants
AUTHOR(S): Wilcut, John W.; Gilliam, Charles H.; Wehtje, Glenn R.; Hicks, T. Vint; Berchielli, Diane L.
CORPORATE SOURCE: Alabama Agric. Exp. Stn., Auburn Univ., Auburn, AL, 36849, USA
SOURCE: HortScience (**1991**), 26(2), 159-62
CODEN: HJHSAR; ISSN: 0018-5345
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Preplant-incorporated, preemergence, and postemergence herbicides were evaluated for yellow nutsedge (Cyperus esculentus) control and for phytotoxicity to four container-grown woody plants. Preplant-incorporated or preemergence applications of chlorimuron at 0.07 kg/ha or imazaquin at 1.12 kg/ha provided the greatest control of yellow nutsedge. Imazaquin applied at 0.28, 0.56, 0.84, or 1.12 kg/ha suppressed growth of Rhododendron .times. 'Copperman' azalea and Lagerstroemia indica .times. fauriei 'Natchez'. All other herbicides tested were safe on the four woody plants evaluated. Chlorimuron provided the best combination of yellow nutsedge control and tolerance on woody ornamentals.

IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
RL: BIOL (Biological study)
(yellow nutsedge control by, in landscape plants)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

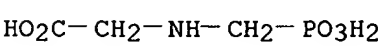


L39 ANSWER 86 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:137962 HCAPLUS
DOCUMENT NUMBER: 114:137962
TITLE: Induction of nitrate reductase in leaf disks of Beta vulgaris (sugar beet) and Chenopodium album (white goosefoot) by herbicides
AUTHOR(S): Schoenfeld, Gudrun; Baumann, Ingrid
CORPORATE SOURCE: Sekt. Chem./Biol., Paedagog. Hochsch. "Karl Liebknecht", Potsdam, DDR 1571, Ger. Dem. Rep.
SOURCE: Wissenschaftliche Zeitschrift der Paedagogischen Hochschule Karl Liebknecht Potsdam (**1990**), 34(1), 25-34
CODEN: WPKLAO; ISSN: 0138-290X
DOCUMENT TYPE: Journal
LANGUAGE: German

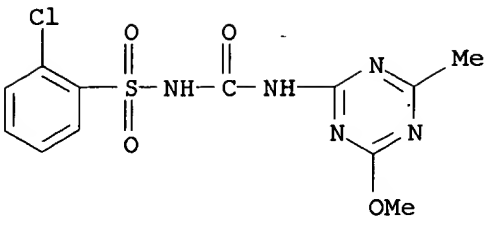
AB The herbicides phenmedipham, glyphosate and chlorsulfuron were used at 10-3-10-8M in expts. with leaf disks from sugar beet and white goosefoot. The initial nitrate reductase activity was very low after a preceding dark period and induction followed under simultaneous nitrate, light and herbicide treatment. Phenmedipham at higher concns. inhibited nitrate reductase of C. album more than that of sugar beet. Glyphosate, on the other hand, inhibited nitrate reductase in sugar beet more. Chlorsulfuron decreased the enzyme activity at high concns., while stimulating it at 10-7M and 10-8M in both the species.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(nitrate reductase of sugar beet and white goosefoot leaves response to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



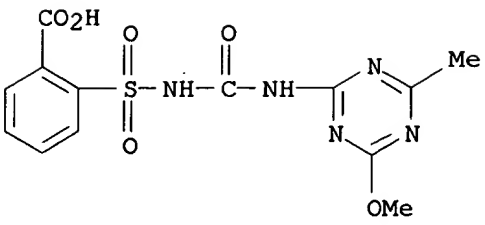
L39 ANSWER 87 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:116836 HCAPLUS
DOCUMENT NUMBER: 114:116836
TITLE: Herbicides for control of tall larkspur (Delphinium barbeyi)
AUTHOR(S): Ralphs, Michael H.; Turner, David L.; Mickelsen, Larry V.; Evans, John O.; Dewey, Steven A.
CORPORATE SOURCE: Poisonous Plant Res. Lab., U.S. Dep. Agric., N. Logan, UT, 84321, USA
SOURCE: Weed Science (**1990**), 38(6), 573-7
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Control of tall larkspur on mountain rangelands would substantially reduce cattle poisoning. Several herbicides were evaluated for their control of tall larkspur in subalpine and aspen vegetation types. Glyphosate (2.2 kg ai ha-1) and picloram (2.2 kg ae ha-1) killed more than 88% of larkspur plants in both vegetation types. Clopyralid and triclopyr were ineffective at comparable rates. Metsulfuron (88 and 138 g ai ha-1) provided variable control. Glyphosate is nonselective and killed all perennial vegetation, except for Thurbers fescue and mountain brome in the aspen type. Picloram applied at 4.5 kg ha-1 suppressed grasses on the subalpine site, but allowed grasses to increase at lower rates. All herbicides reduced forb cover.

IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(tall larkspur control by, in mountain rangelands)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 88 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:116817 HCAPLUS
DOCUMENT NUMBER: 114:116817
TITLE: Horseweed (Conyza canadensis) control in no-tillage soybeans (Glycine max) with preplant and preemergence herbicides
AUTHOR(S): Bruce, Joseph A.; Kells, James J.
CORPORATE SOURCE: Dep. Crop Soil Sci., Michigan State Univ., East Lansing, MI, 48824, USA
SOURCE: Weed Technology (**1990**), 4(3), 642-7
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

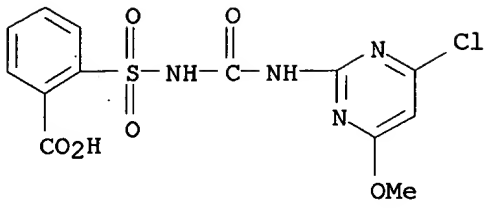
AB Preemergence paraquat at 560 g ha-1 plus metolachlor at 2200 g ha-1, linuron at 840 g ai ha-, and nonionic surfactant at 0.25% (vol./vol.) provided <61% horseweed control in no-tillage soybeans. Glyphosate at 840 g ha-1, 2,4-D ester at 560 g ha-1, HOE-39866 at 840 g ha-1, or BAS-514 at 70 g ha-1 applied early preplant controlled >96% when followed by the above preemergence herbicide combination. Substituting either glyphosate at 840 g ha-1 or HOE-39866 at 840 g ha-1 for paraquat in the preemergence application program significantly increased control. Adding BAS-514 at 70 g ha-1 to preemergence treatments contg. paraquat significantly improved control. The substitution of metribuzin, metribuzin plus chlorimuron (10:1 ratio), or linuron plus chlorimuron (16:1 ratio) for linuron resulted in greater control and soybean yield. Sequential applications controlled horseweed equal to or better than a single preemergence application at the same total rate.

IT **123385-65-9 128398-80-1**
RL: BIOL (Biological study)
(horseweed control by, in soybean)

RN 123385-65-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one (9CI) (CA INDEX NAME)

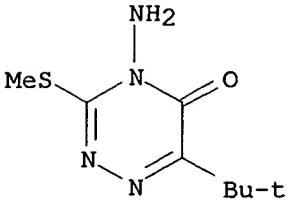
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

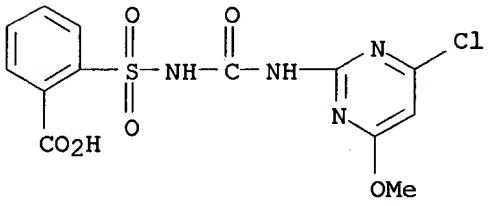
CRN 21087-64-9
CMF C8 H14 N4 O S



RN 128398-80-1 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with N'-(3,4-dichlorophenyl)-N-methoxy-N-methylurea (9CI) (CA INDEX NAME)

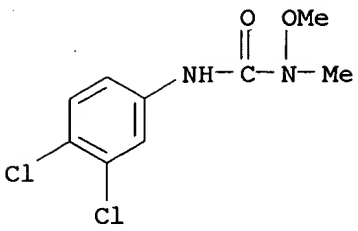
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S

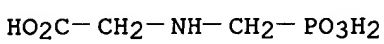


CM 2

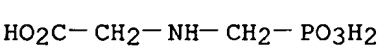
CRN 330-55-2
CMF C9 H10 Cl2 N2 O2



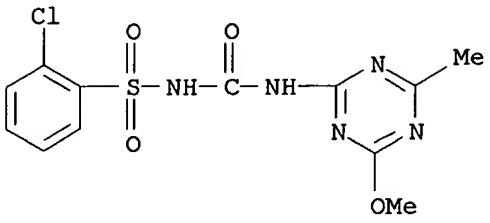
IT **1071-83-6**, Glyphosate
RL: BIOL (Biological study)
(horseweed control in soybean by)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L39 ANSWER 89 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:116789 HCAPLUS
DOCUMENT NUMBER: 114:116789
TITLE: A rapid method using Ricinus communis for the estimation of phloem translocation of xenobiotics
AUTHOR(S): Bromilow, Richard H.; Chamberlain, Keith; Patil, Shantagouda G.
CORPORATE SOURCE: Inst. Arable Crops Res., AFRC, Harpenden/Hertfordshire, AL5 2JQ, UK
SOURCE: Pesticide Science (**1990**), 30(1), 1-12
CODEN: PSSCBG; ISSN: 0031-613X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Compds. are applied by injection of an aq. soln. into the petioles of plants of castor bean (R. communis var. Gibsonii), and phloem sap is collected from two incisions made in the stem below the treated leaves for 2-4 h after application. Amts. of compds. in the sap are measured by liq. scintillation counting following TLC for radio-labeled samples or by HPLC for non-radiolabeled compds. A semi-quant. est. of mobility in phloem can be obtained from these tests, including an est. of the potential for long-distance transport via phloem. Mobilities in phloem measured for 28 compds., mostly weak acids, are placed within a general framework for understanding the phloem transport of compds. in terms of their physicochem. properties. This approach can be used to predict and interpret the behavior of new compds. from a knowledge of their polarity and acid strength.
IT **1071-83-6**, Glyphosate **64902-72-3**
RL: BIOL (Biological study)
(phloem translocation of, bioassay for, using Ricinus communis)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

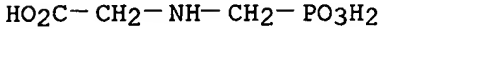


RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

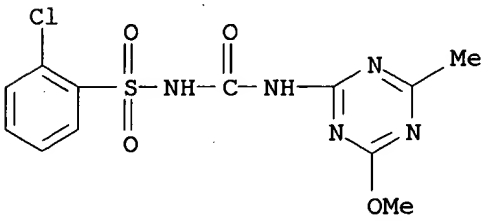


L39 ANSWER 90 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:57441 HCAPLUS
DOCUMENT NUMBER: 114:57441
TITLE: Evaluation of herbicides for control of summer-growing weeds on fallows in south-eastern Australia
AUTHOR(S): Leys, A. R.; Amor, R. L.; Barnett, A. G.; Plater, B.
CORPORATE SOURCE: Agric. Res. Inst., NSW Agric. Fish., Wagga Wagga, 2650, Australia
SOURCE: Australian Journal of Experimental Agriculture (**1990**), 30(2), 271-9
CODEN: AJEAEL; ISSN: 0816-1089
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Eighteen herbicides or herbicide tank-mixes were evaluated over 3 yr (1987-89) for their control of 11 important summer-growing weeds on fallows in southern New South Wales and the Wimmera area of Victoria. Each of the weeds was effectively controlled by at least 1 herbicide. The tank-mixes of glyphosate plus metsulfuron (270 + 4.2 g/ha) and glyophosate plus 2,4-D ester (270 + 320 g/ha) were the most effective treatments, each giving an av. of 68% control of all species. Hogweed (Polygonum aviculare), prickly paddy melon (Cucumis myriocarpus), spear thistle (Cirsium vulgare) and skeleton weed (Chondrilla juncea) were the species most tolerant of these 2 tank-mixes. When these species were excluded, glyphosate plus metsulfuron and glyphosate plus 2,4-D ester gave an av. of 90 and 88% control, resp., of the remaining species (common heliotrope, Heliotropium europaeum; camel melon, Citrullus lanatus lanatus; prickly lettuce, Lactuca serriola; sowthistle, Sonchus spp.; clammy goosefoot, Chenopodium pumilio; caltrop, Tribulus terrestris; stink grass, Eragrostis cilianensis). Hogweed was most effectively controlled by 2,4-D amine plus dicamba (750 + 100 g/ha) or 2,4-D ester 100 g/ha); prickly paddy melon by 2,4-D amine plus triclopyr (750 + 96 g/ha); spear thistle by 2,4-D amine plus dicamba (750 + 100 g/ha) or glyphosate plus clopyralid (270 + 60 g/ha); and skeleton weed by 2,4-D amine plus clopyralid (750 + 60 g/ha). A pot expt. confirmed field observations that, as common heliotrope ages, glyphosate and glyphosate plus metsulfuron become less effective for its control.
IT **1071-83-6 64902-72-3**, Chlorsulfuron **79510-48-8**, Metsulfuron **131582-61-1 131755-58-3 131755-59-4 131790-85-7**
RL: BIOL (Biological study)
(for weed control in fallow)

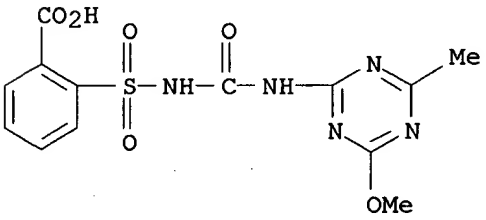
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



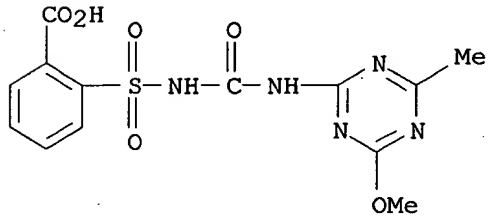
RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 131582-61-1 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, mixt. with (2,4-dichlorophenoxy)acetic acid (9CI) (CA INDEX NAME)

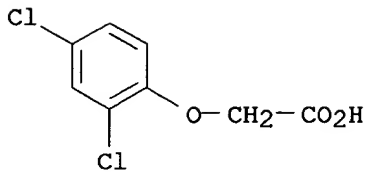
CM 1

CRN 79510-48-8
CMF C13 H13 N5 O6 S



CM 2

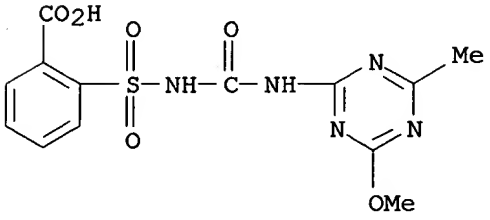
CRN 94-75-7
CMF C8 H6 Cl2 O3



RN 131755-58-3 HCAPLUS
CN 2-Pyridinecarboxylic acid, 3,6-dichloro-, mixt. with 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

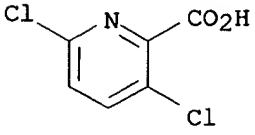
CM 1

CRN 79510-48-8
CMF C13 H13 N5 O6 S



CM 2

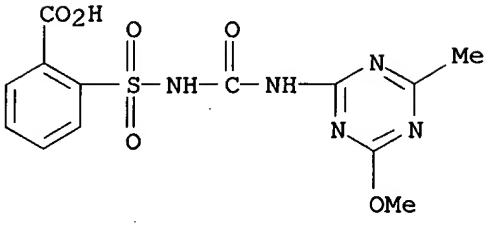
CRN 1702-17-6
CMF C6 H3 Cl2 N O2



RN 131755-59-4 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 79510-48-8
CMF C13 H13 N5 O6 S



CM 2

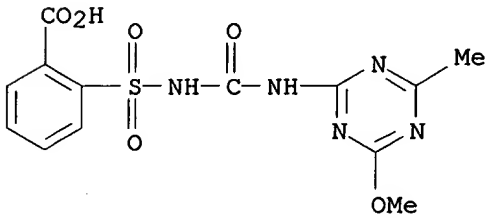
CRN 1071-83-6
CMF C3 H8 N O5 P

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 131790-85-7 HCAPLUS
CN Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, mixt. with 1,1'-dimethyl-4,4'-bipyridinium and 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoic acid (9CI) (CA INDEX NAME)

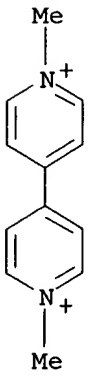
CM 1

CRN 79510-48-8
CMF C13 H13 N5 O6 S



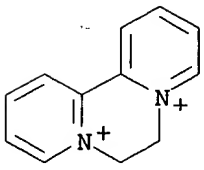
CM 2

CRN 4685-14-7
CMF C12 H14 N2



CM 3

CRN 2764-72-9
CMF C12 H12 N2



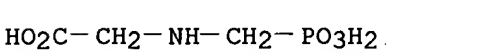
L39 ANSWER 91 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:37635 HCAPLUS
DOCUMENT NUMBER: 114:37635
TITLE: A new simple bioassay to evaluate photosynthetic electron-transport inhibition utilizing paraquat phytotoxicity
AUTHOR(S): Yanase, Daisuke; Andoh, Akihide; Yasudomi, Norio
CORPORATE SOURCE: Naruto Res. Cent., Otsuka Chem. Co., Ltd., Naruto, 772, Japan
SOURCE: Pesticide Biochemistry and Physiology (**1990**), 38(1), 92-8
CODEN: PCBPBS; ISSN: 0048-3575
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new bioassay was established to evaluate photosynthesis-inhibiting activity of herbicide candidates by measuring their activity to alleviate phytotoxicity of paraquat expressed in terms of electrolyte leakage from cucumber cotyledon disks in the light. This assay, which requires neither such expert manipulation as isolation of chloroplasts or aseptic culture of plant cells nor expensive equipment, proved to be highly specific to photosynthesis inhibitors and sensitive enough to detect most of them below 10-6 M. This method may have potential use as a technique to study various aspects of photosynthesis-inhibiting herbicides.

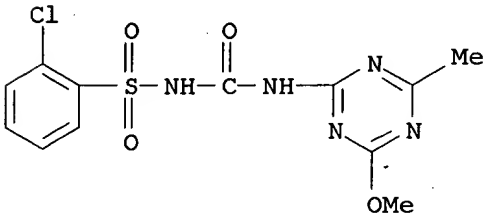
IT **1071-83-6,** Glyphosate **64902-72-3 74222-97-2,** Sulfometuron-methyl
RL: BIOL (Biological study)

(photosynthetic electron transport inhibition by, bioassay for, using paraquat phytotoxicity)

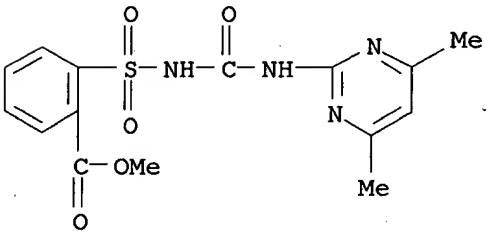
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

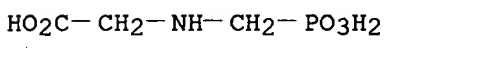


L39 ANSWER 92 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:20862 HCAPLUS
DOCUMENT NUMBER: 114:20862
TITLE: Growth of Fusarium graminearum Schwabe Group 1 on media amended with atrazine, chlorsulfuron or glyphosate in relation to temperature and osmotic potential
AUTHOR(S): Jeffery, S.; Burgess, L. W.
CORPORATE SOURCE: Dep. Plant Pathol. Agric. Entomol., Univ. Sydney, Sydney, 2006, Australia
SOURCE: Soil Biology & Biochemistry (**1990**), 22(5), 665-70
CODEN: SBIOAH; ISSN: 0038-0717
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The herbicides atrazine, chlorosulfuron and glyphosate were added to potato dextrose agar (PDA), PDA with TES buffer [N-

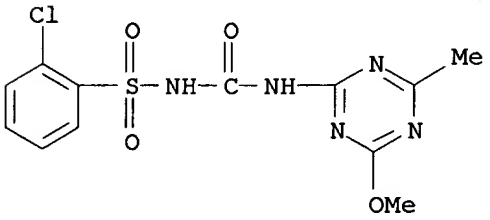
tris(hydroxymethyl)methylaminoethanesulfonic acid] (PDAT) and Defined Buffered Agar with TES (DBAT) with unamended controls for each medium and herbicide. F. graminearum Group 1 from Phaloris paradoxa was grown on the media at 25.degree. and colony growth rates were estd. for 3 days. The fungus was also grown on DBAT amended with the herbicides at five temps., and on DBAT adjusted to five osmotic potentials with NaCl at 15 or 25.degree.. Atrazine significantly reduced growth rates on PDA and PDAT at 50 .mu.g mL-1, a concn. equiv. to field rates used with sorghum. Temps. between 10 and 30.degree. and osmotic potentials between -0.5 and -4.5 MPa at 25.degree. did not modify the response of the fungus to atrazine (1, 5, 10 or 50 .mu.g mL-1). Colony pigmentation was generally reduced and margins tended to become more irregular with increased amts. of atrazine. Chlorsulfuron did not affect growth rates on any medium or between 10 and 30.degree. on DBAT, except at amts. well above field rates (0.5 .mu.g mL-1). Glyphosate did not affect growth rate at any temp. or osmotic potential. Apparently, is unlikely that the herbicides will have a significant direct effect on parasitic growth of F. graminearum Group 1 under field conditions. The influence of unbuffered media and the amts. of nutrients on the significance of such studies is discussed.

IT **1071-83-6**, Glyphosate **64902-72-3**
RL: BIOL (Biological study)
(Fusarium graminearum growth in media amended with, temp. and osmotic potential in relation to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 93 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:19382 HCAPLUS
DOCUMENT NUMBER: 114:19382
TITLE: Self-limitation of herbicide mobility by phytotoxic action
AUTHOR(S): Geiger, Donald R.; Bestman, Hank D.
CORPORATE SOURCE: Dep. Biol., Univ. Dayton, Dayton, OH, 45469, USA
SOURCE: Weed Science (**1990**), 38(3), 324-9
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

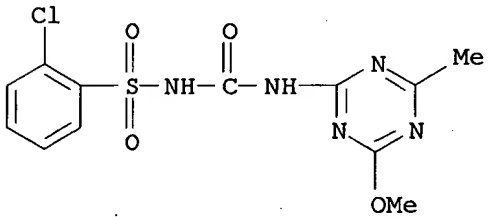
AB Translocation of phloem-mobile herbicides was inhibited by their phytotoxic action on processes that maintain assimilate translocation. Glyphosate lowered import into developing sink leaves soon after it was applied to exporting sugar beet leaves. Later, photosynthesis slowed down and starch accumulation stopped, but export of both assimilate and glyphosate continued until it was limited by starch availability at night. Expts. with field pennycress and Tartary buckwheat indicated that self-limitation of chlorsulfuron translocation probably occurred and that it resulted from lowered assimilate entry into phloem rather than from inhibition of photosynthesis or carbon allocation. Leakage of chlorsulfuron from the phloem when export was slowed down also may have contributed to its reduced translocation.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(self-limitation of phloem mobility of, by phytotoxic action of)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



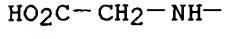
L39 ANSWER 94 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:626351 HCAPLUS
DOCUMENT NUMBER: 113:226351
TITLE: Control of young Mediterranean saltwort (Salsola vermiculata) with postemergence herbicides
AUTHOR(S): Creager, Richard A.
CORPORATE SOURCE: Foreign Dis.-Weed Sci. Res., Agric. Res. Serv., Frederick, MD, 21701, USA
SOURCE: Weed Technology (**1990**), 4(2), 376-9
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Mediterranean saltwort has become and established weed in the upper San Joaquin Valley and the Temblor Range areas of California. Fifteen herbicides were evaluated to det. their effects on 6- to 8-wk-old plants grown in the greenhouse. Mediterranean saltwort was killed by chlosulfruon, hexazinone, and metribuzin, at low rates. Triclopyr (Garlon 3A and Garlon 4), atrazine, imazapyr, glyphosate, dicamba, bromacil,

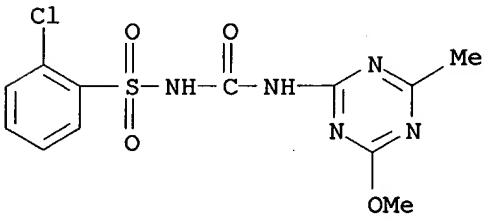
karbutilate, and simazine were effective at higher rates. Four herbicides, asulam, pendimethalin, amitrole, and fosamine, did not kill Mediterranean saltwort at the rates tested.

IT **1071-83-6 64902-72-3,** Chlorsulfuron
RL: BIOL (Biological study)
(Salsola vermiculata control by postemergence)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 95 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:626342 HCAPLUS
DOCUMENT NUMBER: 113:226342
TITLE: Western red cedar response to spring grass control herbicides
AUTHOR(S): Kelpsas, Bruce R.; Pfund, Fred W.
CORPORATE SOURCE: Northwest Chem. Corp., Salem, OR, 97303, USA
SOURCE: Proceedings of the Western Society of Weed Science (**1990**), 43, 45-53
CODEN: WSWPAF; ISSN: 0091-4487
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Red cedar (Thuja plicata) tolerance to several herbicides used for herb control in conifer plantations was studied. Two field trials, one over newly planted cedar and the other over established seedlings, were instigated in the spring of 1989 to test the impact of several herbicides. Individual seedlings were sprayed over the top with a gas-operated back pack sprayer delivering 10 gal per acre. The following herbicides and rates were used: hexazinone 2 lb/acre, sulfometuron 3 oz/acre, atrazine 4 lb/acre, 2,4-D 1 lb/acre, and glyphosate 1 lb/acre. All plots were sprayed the first week of Apr. In addn., glyphosate with two surfactant concns. was also tested at one (established trees) or two (planted trees) other timings. Both trials were established as randomized complete block designs with four replications. Six months after application the established seedlings were visually evaluated for crown kill and growth redn. Total height of these seedlings also was measured, as was herb cover remaining around each tree. Mortality in both trials also was evaluated at this time. The results of these trials indicate that red

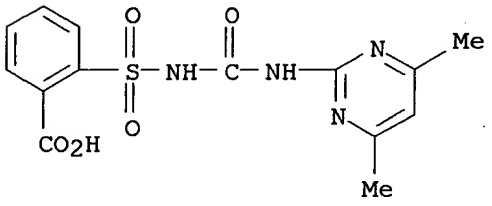
cedar can be damaged by several herbicides. Established seedlings were severely damaged by hexazinone (60% crown kill), and less so by 2,4-D combined with atrazine (25% crown kill). Atrazine alone injured crowns the least (<5%), with sulfometuron and all glyphosate treatments near 10% injury. Visual ratings of growth redn. presented a different picture however, where hexazinone, sulfometuron, and 2,4-D plus atrazine had ratings of 60, 40, and 35%, resp. All glyphosate treatments varied near 25% growth redn. Atrazine was the least stunting with a rating of <10%. Total seedling height also followed this trend, although the differences between treatments were not as great. Herb control following treatment also varied by herbicide. Herb cover remaining around hexazinone treated seedlings was the least of all methods (<10%) followed atrazine plus glyphosate (12%) and sulfometuron (14%). Trees treated with atrazine along had an av. herb cover rating of 18 percent while all glyphosate applications varied between 25 and 30% cover. These results suggest that although hexazinone and sulfometuron provided better weed control than other treatments, they can be damaging over red cedar. Atrazine alone may be the best treatment for both avoiding injury and controlling herbaceous vegetation.

IT **1071-83-6**, Glyphosate **74223-56-6**, Sulfometuron
RL: BIOL (Biological study)
(western red cedar tolerance to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



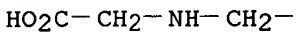
L39 ANSWER 96 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:	1990:454241 HCAPLUS
DOCUMENT NUMBER:	113:54241
TITLE:	Reducing herbicide inputs when establishing no-till soybeans (Glycine max)
AUTHOR(S):	Moseley, Carroll M.; Hagood, Edward S., Jr.
CORPORATE SOURCE:	Dep. Plant Pathol., Physiol., Weed Sci., Virginia Polytech. Inst. and State Univ., Blacksburg, VA, 24061, USA
SOURCE:	Weed Technology (**1990**), 4(1), 14-19 CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB In full-season soybean expts. adding glyphosate, paraquat, or HOE-0661 to chlorimuron, chlorimuron plus linuron, chlorimuron plus metribuzin, or imazaquin was required for effective weed control, esp. eastern black nightshade. In double-crop soybean expts., chlorimuron plus linuron provided similar weed control and yields with or without either glyphosate, paraquat, or HOE-0661. In both full-season and double-crop soybeans, metolachlor combined with chlorimuron mixts. did not enhance weed control or increase yield. These studies indicate a potential for reducing the use of nonselective herbicides or metolachlor when chlorimuron or imazaquin are components of tank mixes, particularly in double-crop no-till soybeans.

IT **1071-83-6**, Glyphosate **123385-65-9**
RL: BIOL (Biological study)
(for establishing no-till soybean, reducing input of)

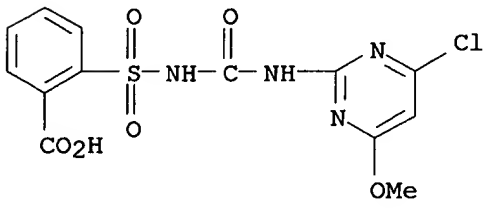
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 123385-65-9 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with 4-amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4H)-one (9CI) (CA INDEX NAME)

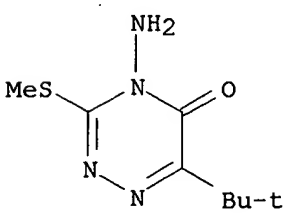
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S



CM 2

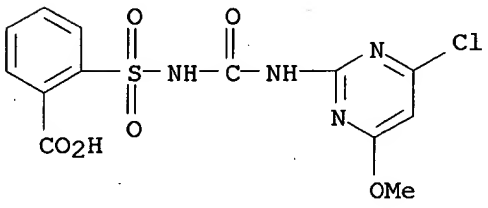
CRN 21087-64-9
CMF C8 H14 N4 O S



IT **128398-80-1**
RL: BIOL (Biological study)
(for establishing no-till soybean, reducing input of nonselective herbicides by use of)
RN 128398-80-1 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with N'-(3,4-dichlorophenyl)-N-methoxy-N-methylurea (9CI) (CA INDEX NAME)

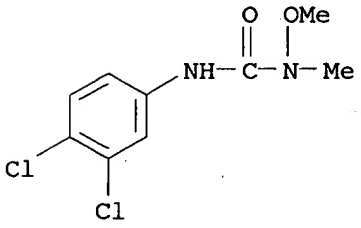
CM 1

CRN 99283-00-8
CMF C13 H11 Cl N4 O6 S

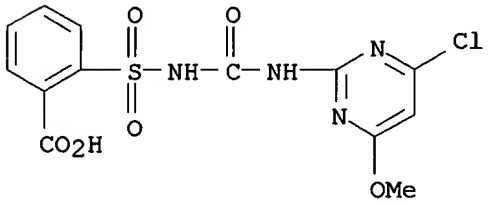


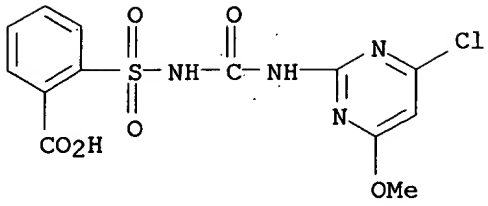
CM 2

CRN 330-55-2
CMF C9 H10 Cl2 N2 O2



IT **99283-00-8**, Chlorimuron
RL: BIOL (Biological study)
(for establishing no-till soybean, reducing input of nonselective herbicides by use of mixts. contg.)
RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



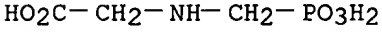


L39 ANSWER 97 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:436338 HCAPLUS
DOCUMENT NUMBER: 113:36338
TITLE: Herbicidal control of duncecap larkspur (Delphinium occidentale)
AUTHOR(S): Mickelsen, Larry V.; Ralphs, Michael H.; Turner, David L.; Evans, John O.; Dewey, Steven A.
CORPORATE SOURCE: Poisonous Plant Res. Lab., Agric. Res. Serv., Logan, UT, 84321, USA
SOURCE: Weed Science (**1990**), 38(2), 153-7
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

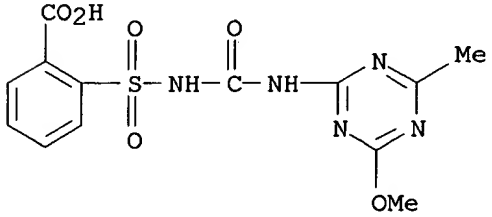
AB Several herbicides were evaluated for their ability to control duncecap larkspur, a serious poisonous plant on mountain rangelands in the western U.S. Duncecap larkspur d. was reduced from 33 to 93% by triclopyr applied at 2.2, 4.5, and 9.0 kg/ha. Picloram applied at 2.2 and 4.5 kg/ha reduced d. from 33 to 99%. Metsulfuron applied at 86 and 138 g/ha reduced d. from 50 to 98%. Glyphosate was the most effective herbicide, reducing d. by 90 to 100% when applied at 2.2 kg/ha. Glyphosate reduced the cover of grasses and perennial forbs but increased cover of annual forbs. All rates of picloram and metsulfuron reduced forb cover. Grass cover increased in most plots where duncecap larkspur and forbs were reduced.

IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(duncecap larkspur control by, on range)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

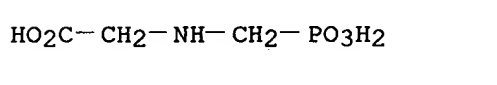


L39 ANSWER 98 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:231031 HCAPLUS
DOCUMENT NUMBER: 112:231031
TITLE: Susceptibility of four hedgerow shrubs to a range of herbicides and plant growth regulators
AUTHOR(S): Marshall, E. J. P.
CORPORATE SOURCE: Dep. Agric. Sci., Univ. Bristol, Bristol, BS18 9AF, UK
SOURCE: Annals of Applied Biology (**1989**), 115(3), 469-79
CODEN: AABIAV; ISSN: 0003-4746
DOCUMENT TYPE: Journal
LANGUAGE: English

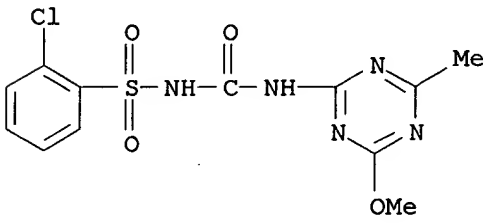
AB Crataegus monogyna, Prunus spinosa, Fraxinus excelsior and Sambucus nigra were grown in pots and treated in June with half and full recommended rates of 15 herbicides and 3 plant growth regulators. C. monogyna was affected by fewest compds., while the other three species showed differing tolerances. The wild-oat herbicides, diclofop-Me, flamprop M-isopropyl and difenzoquat did not adversely affect the shrubs. Plant growth regulators used at rates recommended for cereals and grassland had only minor effects. Clopyralid killed only S. nigra, while mecoprop, fluroxypyr, chlorsulfuron, metsulfuron-Me and glyphosate caused significant damage to most species. The height of C. monogyna was increased after treatment with diclofop-Me, difenzoquat, ethofumesate, mefluidide and chlormequat.

IT **1071-83-6 64902-72-3 74223-64-6**
RL: BIOL (Biological study)
(hedgerow species susceptibility to)

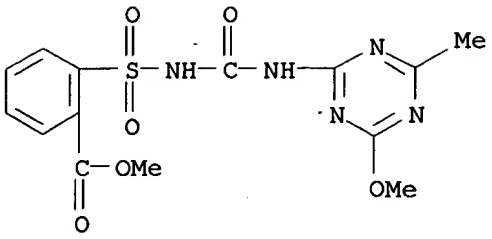
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 99 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:93931 HCAPLUS
DOCUMENT NUMBER: 112:93931
TITLE: Glyphosate-based herbicidal compositions
INVENTOR(S): Gimesi, Antal
PATENT ASSIGNEE(S): Magyar Tudomanyos Akademia, Novenyvedelmi Kutato Intezet, Hung.
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8904607	A1	19890601	WO 1988-HU74	19881117 <--
W: US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
HU 48105	A2	19890529	HU 1987-5122	19871118 <--
HU 202062	B	19910228		

PRIORITY APPLN. INFO.: HU 1987-5122 19871118

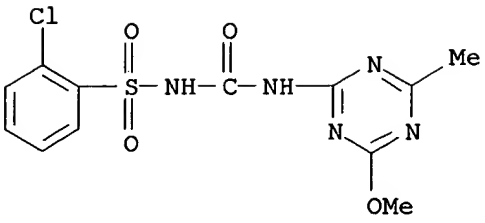
AB A herbicidal compn. comprises glyphosate and chlorosulfurone [1-(2-chlorophenylsulfonyl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea], and/or mefluidide, and/or ethephon, and/or 1-decanol, and/or S-Et 4-chloro-o-tolyloxythioacetate, and/or trace elements, like N, P, K, Mg, etc. The synergistic effect decreases by 50% the amt. of glyphosate used. A mixt. of glyphosate 1 and chlorosulfurone 10 kg/ha 100% controlled Agropyron repens, Cynodon dactylon, and Sorghum halepense.

IT **110020-51-4**
RL: BIOL (Biological study)
(herbicidal compn., synergistic)

RN 110020-51-4 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

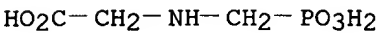
CM 1

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S

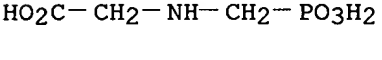


CM 2

CRN 1071-83-6
CMF C3 H8 N O5 P



IT **1071-83-6D**, Glyphosate, mixts. contg.
RL: BIOL (Biological study)
(herbicidal compns., synergistic)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



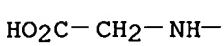
L39 ANSWER 100 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:93843 HCAPLUS
DOCUMENT NUMBER: 112:93843
TITLE: Effects of late-season herbicide applications on sicklepod (Cassia obtusifolia) seed production and viability
AUTHOR(S): Isaacs, Mark A.; Murdock, Edward C.; Toler, Joe E.; Wallace, Susan U.
CORPORATE SOURCE: South Carolina Agric. Exp. Stn., Clemson Univ., Clemson, SC, 29634, USA
SOURCE: Weed Science (**1989**), 37(6), 761-5
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Application of chlorimuron and imazaquin at 0.28 kg active ingredient/ha to field-grown sicklepod at early bloom and early fruit stages in 1984 and 1985 almost eliminated seed prodn. In addn., none of the seed produced following these treatments were capable of emergence during a 4-wk period following acid scarification. Glyphosate applied at 0.28 kg/ha at early bloom decreased seed prodn. 84% but did not affect seedling emergence in 1984, and precluded prodn. of seed capable of emergence in 1985. Glyphosate applications at the early fruit stage reduced the no. of seed that emerged by 93 and 90% in 1984 and 1985, resp. Application of 2,4-DB at 0.28 kg/ha and 2,4-D at 0.56 kg/ha at early bloom did not affect seed prodn. or emergence in 1984 but almost eliminated prodn. of seed capable of emergence in 1985. Applications of 2,4-DB and 2,4-D at the early fruit

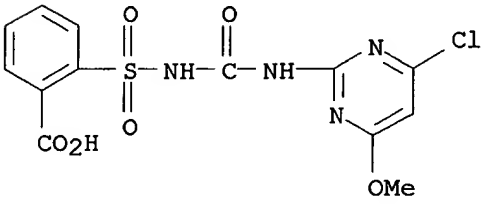
stage decreased the no. of seeds that emerged by 99 and 52% in 1984 and 46 and 57% in 1985, resp. Herbicide applications at the late fruit stage were generally less effective thanearlier applications.

IT **1071-83-6**, Glyphosate **99283-00-8**, Chlorimuron
RL: BIOL (Biological study)
(sicklepod seed prodn. and viability response to late-season application of)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 99283-00-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



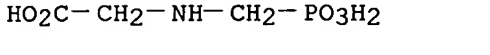
L39 ANSWER 101 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:610518 HCAPLUS
DOCUMENT NUMBER: 111:210518
TITLE: Herbicide effects on the growth and nodulation potential of Rhizobium trifolii with Trifolium subterraneum L
AUTHOR(S): Eberbach, P. L.; Douglas, L. A.
CORPORATE SOURCE: Sch. Agric. For., Univ. Melbourne, Parkville, 3052, Australia
SOURCE: Plant and Soil (**1989**), 119(1), 15-23
CODEN: PLSOA2; ISSN: 0032-079X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of the herbicides 2,4-D, amitrole, atrazine, chlorsulfuron, diclofop-Me, diquat, glyphosate, paraquat, and trifluralin on the nodulation of subterranean clover (T. subterraneaum), the growth of R. trifolii TA1 in liq. nutrient medium and the ability of herbicide-treated inoculum to successfully nodulate clover plants was studied. As concns. of amitrole, diclofop-Me and glyphosate in the rooting environment increased from 0 to 20 mg L-1, nodulation decreased linearly. The other herbicides at these concns. caused more severe decreases in nodulation. Growth of R. trifolii TA1 in nutrient broth was significantly retarded by all concns. of diquat, 2 mg L-1 paraquat, 10 mg L-1 glyphosate and 2 mg L-1 chlorsulforon. Other herbicides did not suppress rhizobial growth. Inoculation with TA1 that had been grown in the presence of amitrole, atrazine or glyphosate and then washed free of the herbicide decreased nodulation of clover, indicating that these herbicides may physiol. influence the nodulating potential of certain strains of Rhizobium. The

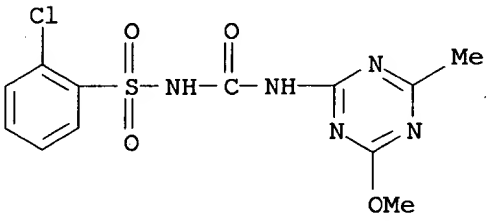
remaining herbicides showed no indications of this effect.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(growth and nodulation potential of Rhizobium trifolii with Trifolium subterraneum response to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



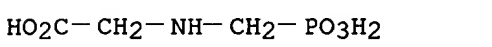
L39 ANSWER 102 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:569273 HCAPLUS
DOCUMENT NUMBER: 111:169273
TITLE: Surfactant and herbicide interactions during photolysis with ultraviolet light
AUTHOR(S): Tanaka, Fred S.
CORPORATE SOURCE: Biosci. Res. Lab., USDA/ARS, Fargo, ND, USA
SOURCE: Adjuvants Agrochem. (**1989**), Volume 2, 15-24.
Editor(s): Chow, Paul N. P. CRC: Boca Raton, Fla.
CODEN: 56OMA9
DOCUMENT TYPE: Conference
LANGUAGE: English

AB The effect of surfactants on the photodegrdn. of monuron in aq. soln. was examd. using nonionic surfactants of the Tergitol TMN and the Triton X series. Surfactant concns. were in excess of the crit. micelle concn., and samples were examd. under oxygenated and nonoxygenated conditions. In these studies, surfactant caused an increase in the photodegrdn. rate, eliminated the ring hydroxylation reactions, and enhanced the photoreductive dechlorination process. The results indicate that the photoreactions took place in the org. phase of the micelles rather than in the aq. phase of the solvent. To obtain an estn. of surfactant effects in general, herbicides of the phenylurea, carbamate, amide, and triazine classes were photolyzed in aq. soln. contg. 0.2% heterogeneous Tergitol TMN-10 or Triton X-100. With alkyl surfactant (TMN-10), solubilization of herbicide into the micellar region could either increase or decrease the rate of photodegrdn. depending on the herbicide under investigation. With aryl surfactant (X-100), the chromophoric Ph group could absorb UV light and cause photosensitized degrdn. of some of the herbicides tested. Conversely, to det. the effect of herbicides on surfactant photolysis, the

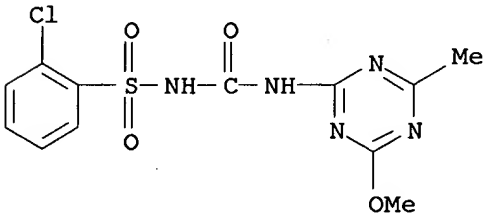
photosensitized degrdn. of homogeneous Tergitol TMN-6 was investigated. The photoproducts identified from TMN-6 degrdn. were surfactants with successively shorter polyoxyethylene glycol side chains, and polyethylene glycols ranging from hexaethylene glycol down to ethylene glycol.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(as sensitizing agent in photolysis of surfactants)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



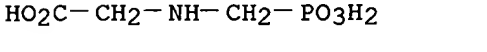
L39 ANSWER 103 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:528909 HCAPLUS
DOCUMENT NUMBER: 111:128909
TITLE: Two pot experiments to assess the post-emergence activity of various herbicides for the control of Pennisetum setosum
AUTHOR(S): Wilson, Anita K.
CORPORATE SOURCE: Dep. Agric. Sci., Univ. Bristol, Bristol, BS18 9AF, UK
SOURCE: Annals of Applied Biology (**1989**), 114(Suppl.), 112-13
CODEN: AABIAV; ISSN: 0003-4746
DOCUMENT TYPE: Journal
LANGUAGE: English

AB P. setosum is a fast growing, tufted, annual or perennial grass weed which has become a serious problem in Southern Thailand. Introduced as a forage crop, it now occurs as a weed in young rubber, oil palm, coffee and orchards. In pot expts. a >68% kill of mature P. setosum was given 2 mo after treatment by imazapyr 1.0, haloxyfop 1.5, glyphosate 1.0 and 3.0, and metsulfuron 0.015 kg/ha. Four months after treatment, the slower acting imazapyr and haloxyfop gave 100% kill at both rates of application, but glyphosate and metsulfuron only achieved 100% kill at the highest rates. Against seedlings, DPX-L5300, DPX-A7881 and thiasulfuron repeated the good activity of the related compd. metsulfuron against mature plants, with selectivity in a wide range of legume and cereal crops. The activity of imazethapyr, was similar to that of imazapyr on mature plants, giving selectivity in groundnut, soybean, pigeonpea, mungbean, cowpea and maize with safener. Thiameturon-methyl and lactofen, were less active on P.

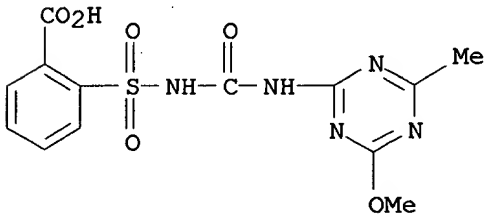
setosum.

IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron **82097-50-5 101200-48-0**, DPX-L5300
RL: BIOL (Biological study)
(Pennisetum setosum control by)

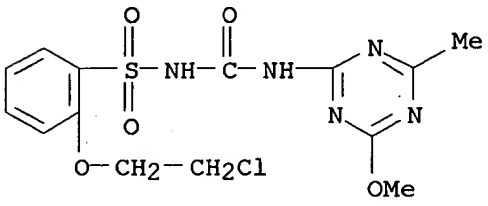
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



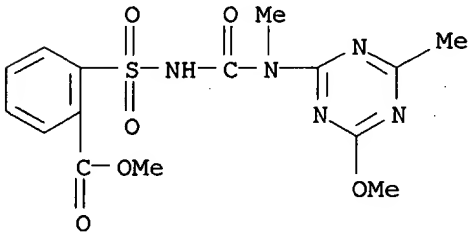
RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



RN 82097-50-5 HCAPLUS
CN Benzenesulfonamide, 2-(2-chloroethoxy)-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 101200-48-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

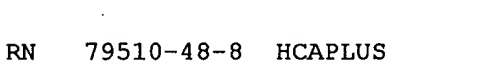


L39 ANSWER 104 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:510926 HCAPLUS
DOCUMENT NUMBER: 111:110926
TITLE: Bigleaf maple control: triclopyr thin-line and spot-foliar application treatments using imazapyr, metsulfuron, and glyphosate
AUTHOR(S): Figueroa, P. F.
CORPORATE SOURCE: Weyerhaeuser Co., Centralia, WA, USA
SOURCE: Proceedings of the Western Society of Weed Science (**1989**), 42, 104-19
CODEN: WSWPAF; ISSN: 0091-4487
DOCUMENT TYPE: Journal
LANGUAGE: English

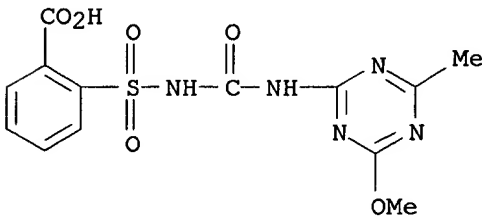
AB Metsulfuron (170 g/ha) and glyphosate (6.7 kg/ha) were not effective herbicides for bigleaf maple (Acer macrophyllum) control applied in June as spot-foliar treatments for Douglas-fir (Pseudotsuga menziesii) release. Full crown application is needed to obtain max. control using imazapyr as a spot-foliar treatment (0.6-1.1 kg/ha). Imazapyr applied as a spot-foliar requires at least two years to show efficacy similar to triclopyr thin-line. Triclopyr dild. 1:1 vol.:vol. with Mor-act or 2,4-DP was effective thin-line treatment. Control of bigleaf maple can be achieved with application rates of 2 mL triclopyr per m2 crown area, provided all stems are banded. Triclopyr soln. rates to 45% concn. are theor. possible if delivery rates av. 59 mL per clump (with a two-fold safety margin).

IT **1071-83-6**, Glyphosate **79510-48-8**, Metsulfuron
RL: BIOL (Biological study)
(bigleaf maple control by, in Douglas-fir)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79510-48-8 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



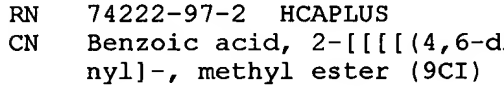
L39 ANSWER 105 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:473004 HCAPLUS
DOCUMENT NUMBER: 111:73004
TITLE: Control of herbaceous competitors in progeny tests using container-grown seedlings

AUTHOR(S): Yeiser, J. L.; Boyd, J. W.; Reed, D. J.
CORPORATE SOURCE: Dep. For. Resourc., Univ. Arkansas, Monticello, AR, 71655, USA
SOURCE: Proceedings of the Arkansas Academy of Science (**1988**), 42, 105-7
CODEN: AKASAO; ISSN: 0097-4374
DOCUMENT TYPE: Journal
LANGUAGE: English

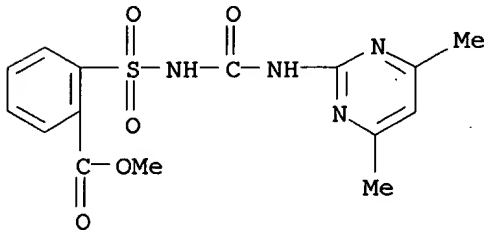
AB Broadcasting 3.2 kg glyphosate/ha in Sept. controlled weeds in loblolly pine (Pinus taeda) and shortleaf pine (P. echinata), outplanted subsequently in May. New germinants of Andropogon were controlled by imazapyr and by hexazinone + sulfometuron-methyl. Reapplication of glycphosate in July, after covering the seedlings, afforded nearly total control. Glyphosate also gave the highest survival and the best growth of both pine species. Imazapyr also gave satisfactory survival and growth. Atrazine + sulfometuron-methyl was toxic to pines.

IT **1071-83-6**, Glyphosate **74222-97-2**, Sulfometuron methyl **106805-65-6 121984-66-5**
RL: BIOL (Biological study)
(weed control by, in pine plantations)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



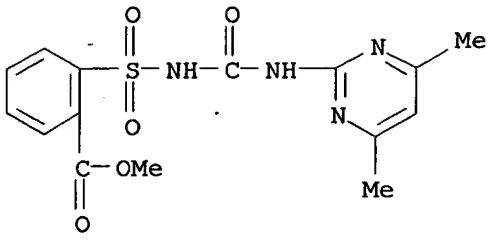
RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 106805-65-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester, mixt. with 3-cyclohexyl-6-(dimethylamino)-1-methyl-1,3,5-triazine-2,4(1H,3H)-dione (9CI) (CA INDEX NAME)

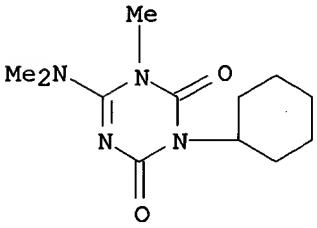
CM 1

CRN 74222-97-2
CMF C15 H16 N4 O5 S



CM 2

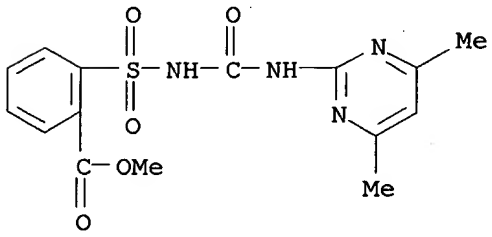
CRN 51235-04-2
CMF C12 H20 N4 O2



RN 121984-66-5 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester, mixt. with 6-chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

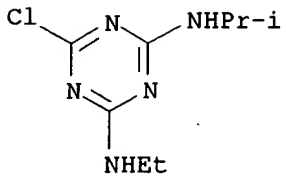
CM 1

CRN 74222-97-2
CMF C15 H16 N4 O5 S



CM 2

CRN 1912-24-9
CMF C8 H14 Cl N5



L39 ANSWER 106 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:472819 HCAPLUS
DOCUMENT NUMBER: 111:72819
TITLE: Assessment of the effects of herbicide spray drift on a range of plant species of conservation interest
AUTHOR(S): Marrs, R. H.; Williams, C. T.; Frost, A. J.; Plant, R. A.
CORPORATE SOURCE: Inst. Terrestrial Ecol., NERC, Huntingdon, PE17 2LS, UK
SOURCE: Environmental Pollution (Oxford, United Kingdom) (**1989**), 59(1), 71-86
CODEN: ENPOEK; ISSN: 0269-7491
DOCUMENT TYPE: Journal
LANGUAGE: English

AB With increasing use of herbicides there has been growing concern that spray drift from treated land will affect vegetation on adjacent nature reserves and other areas of high conservation interest. A preliminary attempt was made to assess this risk by placing a range of native plant species at different distances downwind from standardized drift events and assessing lethal effects and sublethal damage. Five herbicides were tested: asulam, Finesse (chlorsulfuron + metsulfuron-methyl), glyphosate, MCPA, and mecoprop. Applications were made at the appropriate time of years for each herbicide (autumn, spring, and summer), and at both low and high wind speeds. The max. safe distance at which no lethal effects were found was 6 m from the sprayer, but for most herbicides the distance was 2 m or less. Generally, damage symptoms were found at greater distances than lethal effects, but in most cases there was rapid recovery by the end of the growing season. These observations are consistent with drift-deposition models, in which the fallout of herbicide droplets has been measured. It is suggested that buffer zones surrounding nature reserves should be in the order of 5-10 m for ground sprayers to minimize the risk of herbicide impacts on these habitats.

IT **1071-83-6**, Glyphosate **101029-43-0**, Finesse
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (toxicity of, to plants, spray drift in relation to)

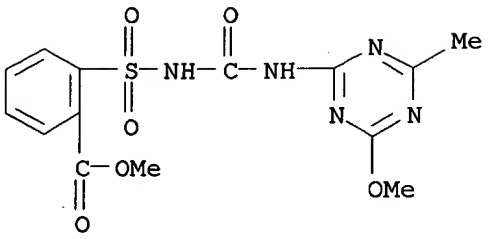
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 101029-43-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

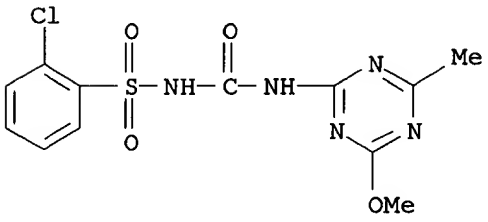
CM 1

CRN 74223-64-6
CMF C14 H15 N5 O6 S



CM 2

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S



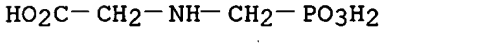
L39 ANSWER 107 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:2791 HCAPLUS
DOCUMENT NUMBER: 110:2791
TITLE: Behavior of herbicides in dicotyledonous roots transformed by Agrobacterium rhizogenes. I. Selectivity
AUTHOR(S): Mugnier, J.
CORPORATE SOURCE: Rhone-Poulenc Agrochim., Lyon, 69263/09, Fr.
SOURCE: Journal of Experimental Botany (**1988**), 39(205), 1045-56
CODEN: JEBOA6; ISSN: 0022-0957
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of various herbicides on the growth of hairy root cultures induced by DNA from A. rhizogenes was studied in dicot crops, ornamentals, and weeds. When a compd. affected the growth of different root species differentially, the difference might be attributed to root uptake and metab. of the herbicide. In general, metab. of the herbicide led to inactivation (clopyralid, linuron, phenmedipham), but in certain instances, the change resulted in activation (quizalofop-ethyl). Visible effects on the root morphol. were obsd.: dinitroanilines and certain carbamates led to remarkable swelling of the root tips; norflurazon and diflufenican were effective bleaching agents in greening root cultures in

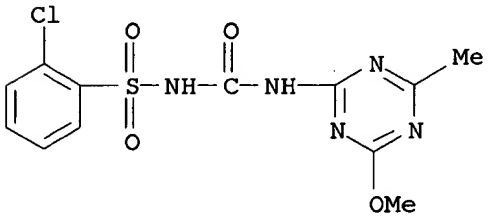
Murashige and Skoog medium, whereas the presence of sucrose in the medium antagonized the effect of triazine herbicides. Growth inhibition by sulfonylureas can be antagonized by addn. of valine and leucine; asulam inhibition was antagonized by addn. of folic acid but glyphosate inhibition was not significantly reversed by arom. amino acids. Bipyridinium and di-Ph ether herbicides, with certain exceptions, have rapid and devastating phytotoxic effects on root growth. The phytotoxic effects of the herbicides on transformed root growth is discussed with particular ref. to their mode of action in intact plants.

IT **1071-83-6**, Glyphosate **64902-72-3 74222-97-2**, Sulfometuron-methyl
RL: BIOL (Biological study)
(hairy root cultures of dicots response to)

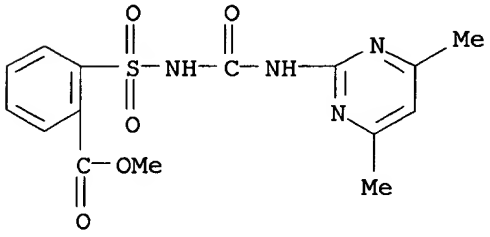
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 108 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:565643 HCAPLUS
DOCUMENT NUMBER: 109:165643
TITLE: First-year results of a herbicide screening trial in a newly established red alder plantation with 1 + 0 bare-root and plug seedling stock

AUTHOR(S): Figueroa, P. F.
CORPORATE SOURCE: Weyerhaeuser Co., Centralia, WA, USA
SOURCE: Proceedings of the Western Society of Weed Science (**1988**), 41, 108-24
CODEN: WSWPAF; ISSN: 0091-4487
DOCUMENT TYPE: Journal
LANGUAGE: English

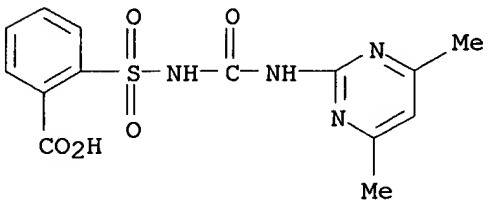
AB Competing vegetation can neg. impact first-year red alder (Alnus rubra) plantation survival, vigor and growth. Under the conditions of study, bare-root stock survived and grew better than plug seedlings. There was also greater sensitivity of plug seedlings to certain herbicides than was the case with bare-root stock. The most effective herbicides for first-year vegetation control were hexazinone, imazapyr, atrazine plus dalapon plus 2,4-D plus triclopyr, sulfometuron, metsulfuron Me and glyphosate in combination with 2,4-D or atrazine. Those having the least effect on the vegetation community were sethoxydim, clopyralid and pronamide. Red alder plug seedlings appeared to be more sensitive to herbicide treatments than were bare-root, but the relative ranking of growth improvement and toxicity were similar. Treatments with the highest survival, vigor and height included glyphosate plus 2,4-D or atrazine, atrazine plus dalapon plus 2,4-D plus triclopyr and hexazinone (2 lb/acre). Treatments that had greatest toxicity include sulfometuron, metsulfuron Me, hexazinone (3 lb/acre) and imazapyr.

IT **1071-83-6**, Glyphosate **74223-56-6**, Sulfometuron **74223-64-6**, Metsulfuron methyl **116775-23-6**, Sulfometuron-terbutryn mixt.
RL: BIOL (Biological study)
(alder plantation cover control by, bare-root and plug seedling stock survival in relation to)

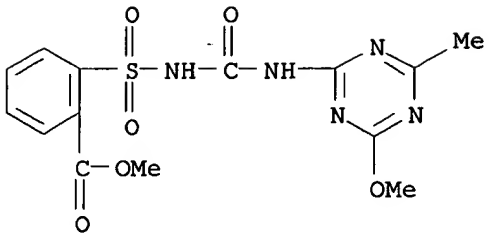
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



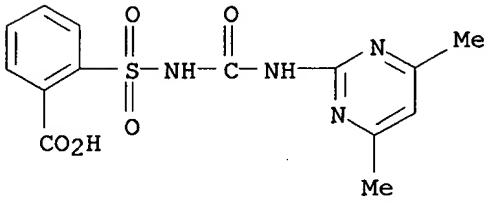
RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 116775-23-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, mixt. with N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

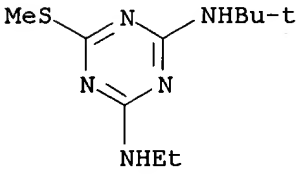
CM 1

CRN 74223-56-6
CMF C14 H14 N4 O5 S



CM 2

CRN 886-50-0
CMF C10 H19 N5 S



L39 ANSWER 109 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:565623 HCAPLUS
DOCUMENT NUMBER: 109:165623
TITLE: Use of the cell wall-less alga Dunaliella bioculata in herbicide screening tests
AUTHOR(S): Felix, H. R.; Chollet, R.; Harr, J.
CORPORATE SOURCE: AGRO Res., Sandoz Ltd., Basel, 4002, Switz.
SOURCE: Annals of Applied Biology (**1988**), 113(1), 55-60
CODEN: AABIAV; ISSN: 0003-4746
DOCUMENT TYPE: Journal

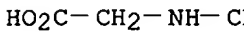
LANGUAGE: English

AB An assay was developed using D. bioculata, a cell wall-less, unicellular alga with 2 flagella, to det. whether it could supplement a program of herbicide screening. Growth was monitored by measuring the optical d. of the culture. Addnl. information was obtained by microscopic examn.; lysis of cells, loss of flagella, immobilization, and bleaching could be readily seen. Comparing 24 com. herbicides with an untreated check, 20 compds. clearly affected D. bioculata. The assay with D. bioculata can be used as a primary indicator of mode of action; as an example, all members of the chem. class of dinitroanilines affected movement and shape of D. bioculata, probably by influencing microtubule structure.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: PROC (Process)
(bioassay of, Dunaliella bioculata in)

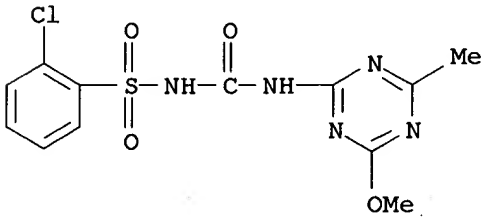
RN 1071-83-6 HCAPLUS

CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 110 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:199817 HCAPLUS

DOCUMENT NUMBER: 108:199817

TITLE: Effects of herbicide residues on germination and early survival of red oak acorns

AUTHOR(S): Shipman, R. D.; Prunty, T. J.

CORPORATE SOURCE: Pennsylvania State Univ., University Park, PA, 16802, USA

SOURCE: Proceedings of the Annual Meeting of the Northeastern Weed Science Society (**1988**), 42, 86-91
CODEN: PNWSBF; ISSN: 0078-1703

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A greenhouse expt. was conducted to det. the effects of parent herbicide residues on red oak (Quercus rubra) acorns, as indicated by differences in percentage germination and juvenile height growth. One, two and four times the manufacturer's recommended rates of dicamba, 2,4-D, glyphosate, glyphosate plus nonionic surfactant, hexazinone, picloram, simazine, sulfometuron-Me, triclopyr, and tricolpyr plus picloram were applied to acorns sown in pots contg. 2 different forest soil types. Changes in

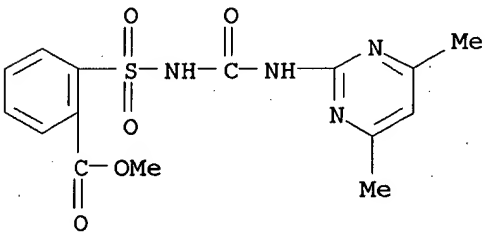
germination percentage, hypocotyl and radicle development throughout a 50-day growth period were used to categorize the variation in acorn response to herbicide application. Herbicide residues of dicamba, 2,4-D, picloram, sulfometuron-Me, triclopyr, and triclopyr plus picloram significantly reduced the percent of germinating acorns. Although there were trends of decreasing mean seedling height with increasing rate of application of several herbicides, only picloram, sulfometruron-Me, and triclopyr significantly reduced postgermination seedling height growth. Treatments with glyphosate, glyphosate plus nonionic surfactant, hexazinone, and simazine had little or no effect on percentage germination or seedling height growth. However, hexazinone inhibited photosynthesis and resulted in eventual death of all seedlings. Soil type had a significant effect on herbicide availability and subsequent phytotoxicity.

IT **1071-83-6**, Glyphosate **74222-97-2**, Sulfometuron-methyl
RL: BIOL (Biological study)
(phytotoxicity of residues of, to red oak acorns)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



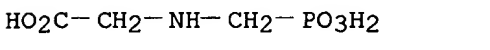
L39 ANSWER 111 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:126262 HCAPLUS
DOCUMENT NUMBER: 108:126262
TITLE: Herbicide effects on the flora of arable field boundaries
AUTHOR(S): Marshall, E. J. P.
CORPORATE SOURCE: Inst. Arable Crops Res., Univ. Bristol, Long Ashton/Bristol, BS18 9AF, UK
SOURCE: Proceedings - British Crop Protection Conference--Weeds (**1987**), (1), 291-8
CODEN: PBCWDF; ISSN: 0144-1604
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Studies of field boundary floras under the Boxworth Project have continued for 4 seasons. Data from broad-scale surveys and detailed studies of limited areas indicated some changes in field edge flora. These did not correlate with intensity of herbicide use in adjacent fields, suggesting other factors, particularly close cultivation, were important in botanical

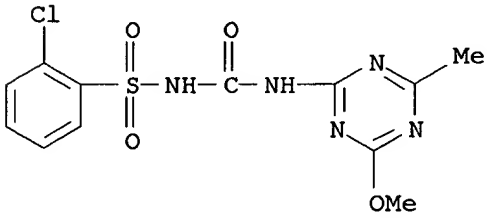
change in field edges. Records of floras adjacent to unsprayed or conservation headlands on the Manydown Estate initially demonstrated a trend for increased plant diversity compared with sprayed headlands, but this was not confirmed. Expts. on the susceptibility of hedgerow plant species have shown the spectra of activity of a range of herbicides and plant growth regulators. Many species might be affected by accidental contamination from over-spraying or spray drift, particularly by mecoprop, fluroxypyr, metsulfuron-Me and glyphosate.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
74223-64-6, Metsulfuron-methyl
RL: PRP (Properties)
(phytotoxicity of, to hedgerow plants)

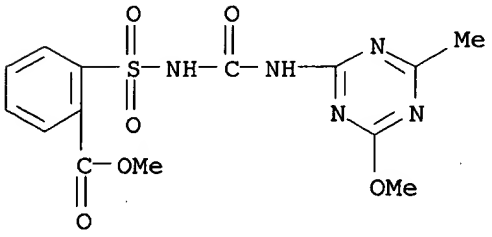
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 112 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:108081 HCAPLUS
DOCUMENT NUMBER: 108:108081
TITLE: Use of growth retardants and herbicides for management of roadside vegetation
AUTHOR(S): Wakefield, R. C.; Sawyer, C. D.
CORPORATE SOURCE: Rhode Island Agric. Exp. Stn., Kingston, RI, USA

SOURCE: Report (**1986**), CONTRIB-2352, FHWA/RI/RD-86/01; Order No. PB87-193934, 71 pp. Avail.: NTIS From: Gov. Rep. Announce. Index (U. S.) 1987, 87(18), Abstr. No. 740,878
DOCUMENT TYPE: Report
LANGUAGE: English

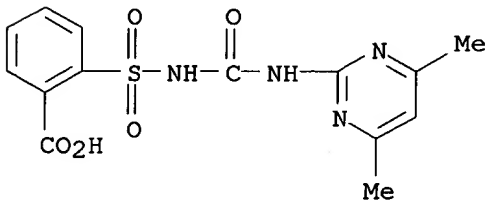
AB Expts. were conducted at highway sites and at the University of Rhode Island to evaluate various growth retardants and times of application for control of vegetative and seedhead growth of grasses. Best results were obtained with mefluidide; use of mefluidide at the prescribed rate and time eliminated the need for mowing early heavy growth of grass in the spring. Addnl. expts. evaluated herbicides for control of vegetation under guardrails and around signs and posts in order to eliminate hand mowing and improve appearance. Glyphosate was useful for temporary control of vegetation. However, excellent season-long control was obtained with several herbicides applied alone and in combinations as follows: (1) bromacil (2) prometon (3) hexazinone plus sulfometuron (4) bromacil plus diuron and (5) bromacil plus diuron plus sulfometuron. These materials remained active in the soil and were best used on level ground in order to avoid washing and injury to adjacent vegetation.

IT **1071-83-6**, Glyphosate **74223-56-6**
RL: BIOL (Biological study)
(roadside vegetation management by)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-56-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



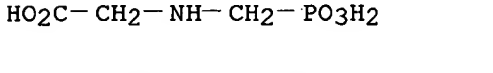
L39 ANSWER 113 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:108062 HCAPLUS
DOCUMENT NUMBER: 108:108062
TITLE: The control of Cirsium arvense (creeping thistle) by sulfonyl urea herbicides and a comparison of methods of assessing efficacy
AUTHOR(S): Davies, C. J.; Orson, J. H.
CORPORATE SOURCE: Dep. Agric. Bot., Univ. Reading, Berkshire, RG6 2A5, UK
SOURCE: Proceedings - British Crop Protection Conference--Weeds (**1987**), (2), 453-60

CODEN: PBCWDF; ISSN: 0144-1604
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The efficacy of the sulfonyl urea herbicides DPX-L5300 and metsulfuron-methyl against C. arvense was examd. a technique assessing root viability of treated plants in the season when herbicides were applied. There were 4 field trials of randomized block design. Two were in winter wheat and 2 were on land which had not been disturbed for 2 yr. Eight weeks after spraying, samples of C. arvense were removed from each plot. The shoot materials was counted and weighed. The root material was planted in compost and after three weeks, assessments of shoot regrowth were made. Mecoprop, MCPA, glyphosate, and clopyralid proved more effective than sulfonyl ureas in controlling C. arvense. The root viability test gave an indication of herbicidal activity.

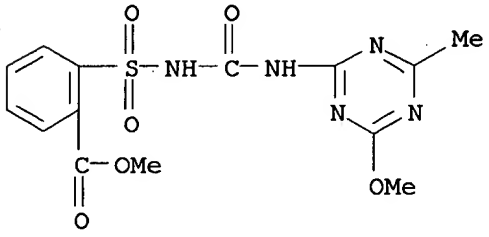
IT **1071-83-6**, Glyphosate
RL: BIOL (Biological study)
(creeping thistle control by sulfonyl urea herbicides and)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

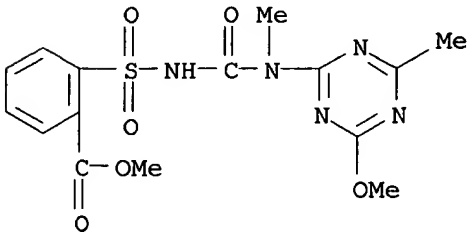


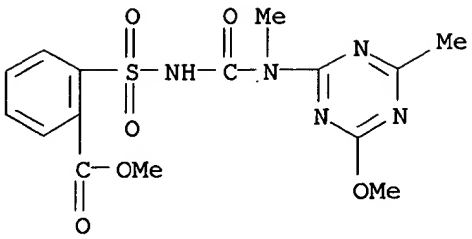
IT **74223-64-6**, Metsulfuron-methyl **101200-48-0**, DPX-L5300
RL: BIOL (Biological study)
(creeping thistle control by, and method for assessing efficiency thereof)

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 101200-48-0 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

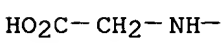




L39 ANSWER 114 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:89422 HCAPLUS
DOCUMENT NUMBER: 108:89422
TITLE: Effect of certain herbicides on soil microbial populations and their influence on saprophytic growth in soil and pathogenicity of take-all fungus
AUTHOR(S): Mekwatanakarn, P.; Sivasithamparam, K.
CORPORATE SOURCE: Sch. Agric., Univ. West. Australia, Nedlands, 6009, Australia
SOURCE: Biology and Fertility of Soils (**1987**), 5(2), 175-80
CODEN: BFSOEE; ISSN: 0178-2762
DOCUMENT TYPE: Journal
LANGUAGE: English

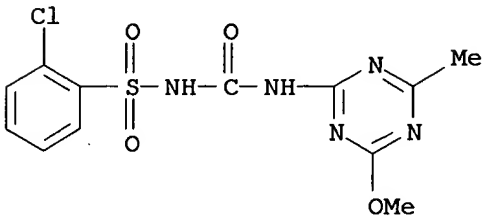
AB The application of diquat + paraquat, glyphosate and trifluralin to unsterilized field soil increased take-all caused by the fungus Gaeumannomyces graminis tritici (Ggt) by 13.0, 16.6 and 10.8%, resp., while no effect on disease was recorded in sterilized soil treated with the same herbicides. The herbicides tested had no effect on the saprophytic growth of the pathogen with the exception of glyphosate, which increased growth in unsterilized soil. The application of diquat + paraquat and glyphosate to unsterile soil had no effect on the nos. of actinomycetes. The diquat + paraquat treatment, however, increased populations of fungi while the glyphosate decreased the nos. of bacteria. The proportion of soil fungi antagonistic to the pathogen was reduced in glyphosate-treated soil. The frequency of occurrence of Eupenicillium euglaucum (strain B), and Penicillium verruculosum (strain B), which were strong and low-level antagonists of Ggt on agar, were reduced by 7.7% and 2.5% resp., following glyphosate treatment. Moreover, the nos. of Aspergillus viridinutans, which showed moderate antagonism to the pathogen, were decreased by 1.9% and 4.1% in diquat + paraquat and glyphosate treatments, resp. The proportion of antagonists rather than total nos. of fungi appears to be related to the treatment effect obsd. on the soil growth and pathogenicity of Ggt. The increase in disease of wheat in certain herbicide-treated soils may be due to the shift in soil microbial populations away from those which are antagonistic to the pathogen.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(soil microbial populations response to, take-all fungus in relation to)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

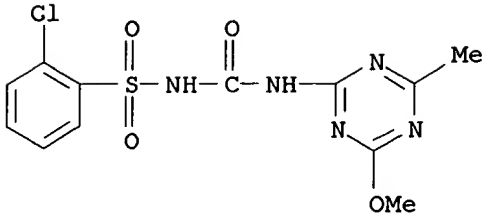


L39 ANSWER 115 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:51171 HCAPLUS
DOCUMENT NUMBER: 108:51171
TITLE: Possibilities for chemical weed control during the vegetation period in lavender stands
AUTHOR(S): Nagy, F.; Foldesi, D.; Szalay, P.
CORPORATE SOURCE: Res. Inst. Med. Plants, Budakalasz, Hung.
SOURCE: Herba Hungarica (**1987**), 26(2-3), 121-9
CODEN: HEHUAW; ISSN: 0018-0580
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new method was elaborated for the chem. weed control in lavender during the dormancy period, for the control of resistant weeds and for cases when this treatment was omitted. The best results for the chem. weed control of lavender stands during the vegetation period were obtained with the herbicide Arelon, which contains isoproturon, at a rate of 3-6 kg/ha. From the second year after planting this herbicide can be combined with 0.4-0.6 kg/ha Lontrel, 3-4 kg/ha Ronstar, 1-1.5 kg/ha Sys-67-B, 1.5-2 kg/ha Goal 2-E or 20-30 g/ha Glean. In the second year after planting only min. rates can be applied, the dose being increased in later years. The herbicide must be sprayed when the weeds have only few leaves and the herbicide or herbicide combination must be chosen according to the dominant weed species. The new method does not leave residues beyond the permitted limits and does not change the essential oil content or the ratio of components. Nevertheless, the one-sided application of chem. weed control is to be avoided and should always be combined with mech. and agrotech. plant protection.
IT **112354-48-0**, Arelon-Glean mixt.
RL: BIOL (Biological study)
(weed control by, in lavender)
RN 112354-48-0 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]-, mixt. with N,N-dimethyl-N'-[4-(1-methylethyl)phenyl]urea (9CI) (CA INDEX NAME)

CM 1

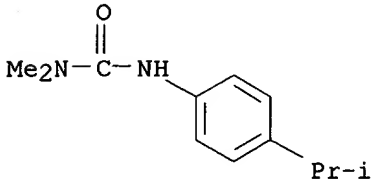
CRN 64902-72-3

CMF C12 H12 Cl N5 O4 S

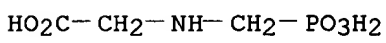


CM 2

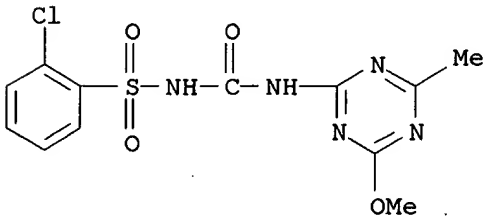
CRN 34123-59-6
CMF C12 H18 N2 O



IT **1071-83-6**, Glialka **64902-72-3**, Glean
RL: BIOL (Biological study)
(weed control by, in lavender, efficacy of)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 116 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:570491 HCAPLUS

DOCUMENT NUMBER: 107:170491
TITLE: Chemical fallow systems for wheat production in the Victorian Wimmera
AUTHOR(S): Amor, R. L.; Ridge, P. E.
CORPORATE SOURCE: Victorian Crops Res. Inst., Horsham, Australia
SOURCE: Plant Protection Quarterly (**1987**), 2(2), 74-8
CODEN: PPQUE8; ISSN: 0815-2195
DOCUMENT TYPE: Journal
LANGUAGE: English

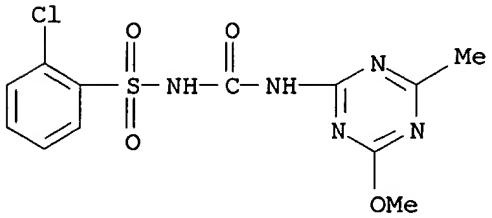
AB Several combinations of herbicides were evaluated for use in chem. fallow systems in the Victorian Wimmera. Herbicides could be substituted for tillage on fallows without reducing the yield of the following wheat crops. Amitrole-T, glyphosate and paraquat/diquat were effective as initial knockdown herbicides, while atrazine at 0.6 kg ha-1 applied in spring provided useful long-term control but required supplementary weed control with other herbicides. Atrazine at 0.8 kg ha-1 was effective when applied without a knockdown herbicide 1 yr before the crop was sown. Chlorsulfuron provided long-term control when applied alone or with atrazine. Cyanazine and diuron have potential as presowing herbicides towards the end of chem. fallows, but use of oxyfluorfen resulted in crop damage. The main weeds causing problems on fallows were Picris echioides, Lactuca serriola, Cirsium vulgare and Sonchus oleraceus.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **110688-56-7**, Amitrole T-chlorsulfuron mixt.
RL: BIOL (Biological study)
(fallow systems contg., for wheat prodn.)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

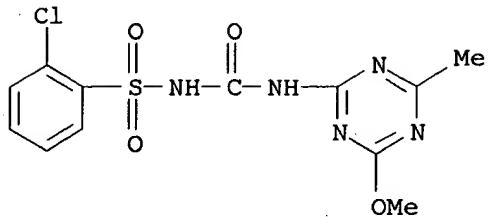


RN 110688-56-7 HCAPLUS
CN Thiocyanic acid, ammonium salt, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide and 1,2,4-triazol-3-amine (9CI) (CA INDEX NAME)

CM 1

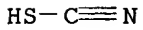
CRN 64902-72-3

CMF C12 H12 Cl N5 O4 S



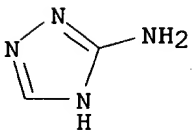
CM 2

CRN 1762-95-4
CMF C H N S . H3 N



CM 3

CRN 61-82-5
CMF C2 H4 N4

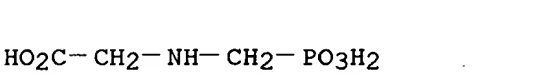


L39 ANSWER 117 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:491806 HCAPLUS
DOCUMENT NUMBER: 107:91806
TITLE: Efficacy of postharvest herbicides on Russian thistle (Salsola iberica) control and seed germination
AUTHOR(S): Young, Frank L.; Whitesides, Ralph E.
CORPORATE SOURCE: Dep. Agron. Soils, Washington State Univ., Pullman, WA, 99164-6420, USA
SOURCE: Weed Science (**1987**), 35(4), 554-9
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Field and lab. studies were conducted to evaluate the efficacy of several herbicides applied after small-grain harvest on Russian thistle (S. iberica) control and subsequent seed germination. Best postharvest

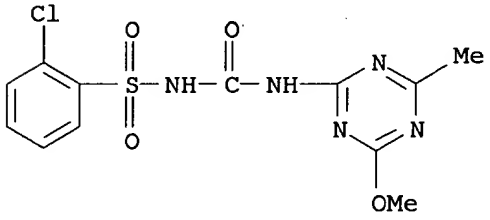
control of Russian thistle was with chlorsulfuron treatments, paraquat, and bromoxynil plus metribuzin, where control ranged from 73 to 96%. During the summer-fallow year, chlorsulfuron and paraquat decreased Russian thistle population and biomass compared to the untreated control. Germination of large seeds from plants treated with paraquat and both rates of chlorsulfuron was reduced at least 64% compared to seeds of similar size from untreated plants.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron **110020-50-3**, Dicamba-chlorsulfuron mixt. **110020-51-4**, Glyphosate-chlorsulfuron mixt.
RL: BIOL (Biological study)
(Russian thistle control by)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



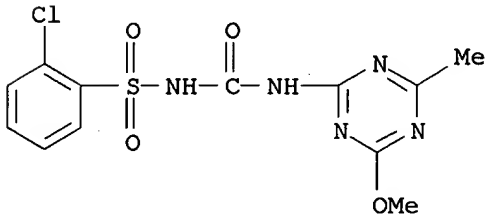
RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 110020-50-3 HCAPLUS
CN Benzoic acid, 3,6-dichloro-2-methoxy-, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

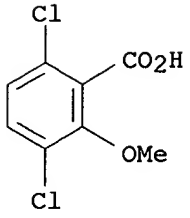
CM 1

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S



CM 2

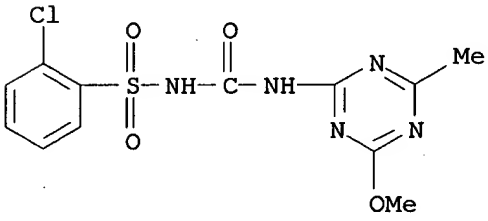
CRN 1918-00-9
CMF C8 H6 Cl2 O3



RN 110020-51-4 HCAPLUS
CN Glycine, N-(phosphonomethyl)-, mixt. with 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide (9CI) (CA INDEX NAME)

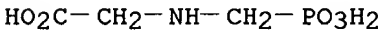
CM 1

CRN 64902-72-3
CMF C12 H12 Cl N5 O4 S



CM 2

CRN 1071-83-6
CMF C3 H8 N O5 P



L39 ANSWER 118 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:454098 HCAPLUS
DOCUMENT NUMBER: 107:54098
TITLE: Effect of herbicides on nitrate reduction in vivo in leaves of Beta vulgaris (sugar beet) and Chenopodium album (lambs-quarters)
AUTHOR(S): Schoenfeld, Gudrun; Baumann, Ingrid; Guenther, Gottfried
CORPORATE SOURCE: Sekt. Chem./Biol., Paedagog. Hochsch. "Karl Liebknecht" Potsdam, Potsdam, DDR-1500, Ger. Dem. Rep.

SOURCE: Wissenschaftliche Zeitschrift der Paedagogischen Hochschule Karl Liebknecht Potsdam (**1986**), 30(1), 23-7
CODEN: WPKLAO; ISSN: 0138-290X
DOCUMENT TYPE: Journal
LANGUAGE: German

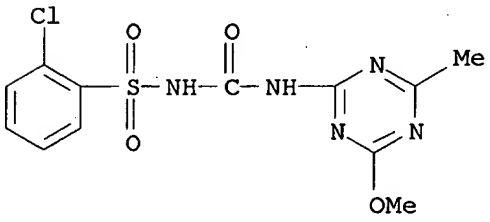
AB The effects of herbicides on nitrate reductase (I) were examd. in leaf explants of sugar beet and C. album, a common weed of beet fields. Leaf explants were treated with 10-3-10-5M herbicide for 1-3 h. Diquat caused a strong inhibition of I within 1h in both species. Diphenylurea had little effect. Diuron increased I in beet, esp. at 10-4M, but inhibited I in C. album. Phenmedipham increased I at 10-3 and 10-4M, esp. in beet. I in beet was stimulated by 2,4-D at the lower concns., but I in C. album was inhibited at all concns. Glyphosate caused a marked increase in I, esp. in beet. Chlorsulfuron mostly caused a small stimulation of I, although the highest concn. was inhibitory in beet. In general, the herbicides were more stimulating of I in beet than in C. album.

IT **1071-83-6**, Glyphosate **64902-72-3**
RL: BIOL (Biological study)
(nitrate reductase of Chenopodium album and sugar beet leaves response to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 119 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:402528 HCAPLUS
DOCUMENT NUMBER: 107:2528
TITLE: Herbicide performance in conventional and no-till small grains
AUTHOR(S): Webb, F. J.; Johnson, Q. R.
CORPORATE SOURCE: Coop. Ext. Syst., Univ. Delaware, Newark, DE, USA
SOURCE: Proceedings of the Annual Meeting of the Northeastern Weed Science Society (**1987**), 41, 49-54
CODEN: PNWSBF; ISSN: 0078-1703
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Field weed control studies were conducted on conventional tillage and

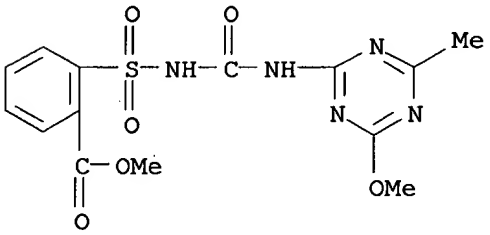
no-tillage wheat (Triticum aestivum) and barley (Hordeum vulgare) in 1984, 1985, and 1986. Control of henbit (Lamium amplexicaule) and common chickweed (Stellaria media) was generally acceptable with DPX-E8698, DPX-R9674, bromoxynil, 2,4-D ester, dicamba, and dinoseb and combinations of these materials. Carolina geranium (Geranium carolinianum) was satisfactorily controlled with dinoseb plus 2,4-D ester in 1986. DPX-E8698 at both rates, DPX-R9674 and DPX-M6316 both at 0.048 lb/acre, 2,4-D ester at 0.75 lb/acre and bromoxynil plus 2,4-D ester both at 0.50 lb/acre were also satisfactory in controlling Carolina geranium in 1985, but were unsatisfactory in 1986. This was probably due to extreme early spring drought in 1986. The no-tillage studies showed that DPX-E8698 at 0.031 and 0.048 lb/acre, DPX-T6376 at 0.016 lb/acre, paraquat at 0.38 lb/acre, glyphosate at 0.50 lb/acre and 0.75 lb/acre and HOE-0661 at 0.50 lb/acre and 0.75 lb/acre provided good to excellent common chickweed and henbit control. The DPX materials also provided residual control activity. All fall no-tillage herbicide treatment ratings were improved with a spring application of 2,4-D ester plus dicamba at 0.38 and 0.13 lb/acre, resp.

IT **1071-83-6**, Glyphosate **74223-64-6**, DPX-T6376
108422-37-3
RL: BIOL (Biological study)
(weed control by, in conventional and no-till small grains)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

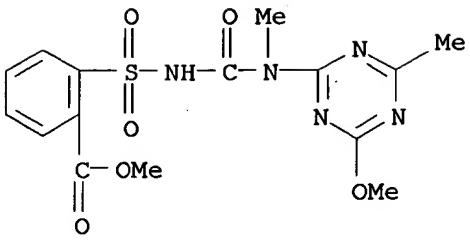
RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 108422-37-3 HCAPLUS
CN 2-Thiophenecarboxylic acid, 3-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, mixt. with methyl 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate (9CI) (CA INDEX NAME)

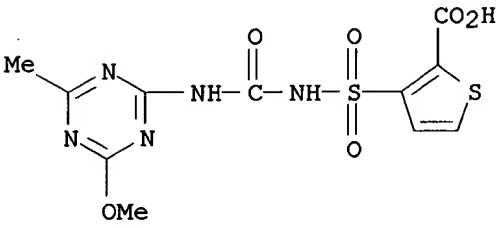
CM 1

CRN 101200-48-0
CMF C15 H17 N5 O6 S



CM 2

CRN 79277-67-1
CMF C11 H11 N5 O6 S2

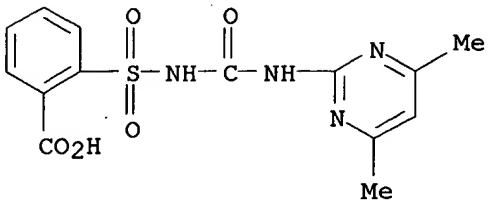


L39 ANSWER 120 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:97989 HCAPLUS
DOCUMENT NUMBER: 106:97989
TITLE: Silver beardgrass (Andropogon saccharoides) control on highway rights-of-way
AUTHOR(S): Samples, Thomas J.; Cargill, Lonnie M.; Brede, A. Douglas
CORPORATE SOURCE: Dep. Hortic. Landscape Arch., Oklahoma State Univ., Stillwater, OK, 74078, USA
SOURCE: Weed Science (**1987**), 35(1), 123-6
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

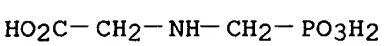
AB Foliar-applied herbicides were evaluated in greenhouse and 5 field studies for control of silver beardgrass (A. saccharoides). In the greenhouse, terbutryn [886-50-0] and glyphosate isopropylamine [38641-94-0] at 3.4 kg ai/ha each consistently controlled silver beardgrass from 7 to 75 days after treatment. Field studies were conducted to investigate silver beardgrass control as influenced by herbicides and timing of herbicide application. Generally, glyphosate [**1071-83-6**] at 1.1 and 1.7 kg/ha satisfactorily controlled silver beardgrass with little or no permanent damage to the existing Bermuda grass (Cynodon dactylon) turf. Decreasing water carrier vol. from 374 to 187 L/ha did not affect phytoactivity of terbutryn at 3.4 kg/ha or glyphosate at 0.4, 0.6, 0.8, or 1.1 kg/ha.

IT **74223-56-6**, Sulfometuron
RL: BIOL (Biological study)
(silver beardgrass control by glyphosate and)
RN 74223-56-6 HCAPLUS

CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)



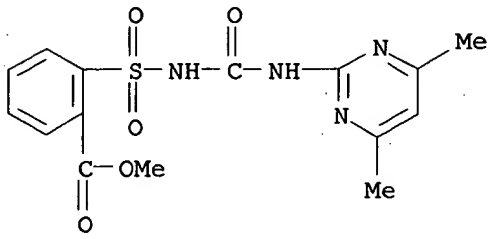
IT **1071-83-6**, Glyphosate
RL: BIOL (Biological study)
(silver beardgrass control by, on roadsides)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L39 ANSWER 121 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:97929 HCAPLUS
DOCUMENT NUMBER: 106:97929
TITLE: Efficacy of pre- and postemergent herbicides in field-planted Pinus eldarica
AUTHOR(S): Fisher, James T.; Dudoich, Dana J.; Fancher, Gregory A.
CORPORATE SOURCE: Dep. Hortic., New Mexico State Univ., Las Cruces, NM, 88003, USA
SOURCE: Forest Ecology and Management (**1986**), 16(1-4), 253-8
CODEN: FECMDW; ISSN: 0378-1127
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Seven herbicides were evaluated in southern New Mexico for weed control and phytotoxicity on field-planted P. eldarica seedlings. Preemergent application of sulfometuron methyl [**74222-97-2**], hexazinone [51235-04-2], sulfometuron-methyl-hexazinone mixt. [**106805-65-6**], oxyfluorfen [42874-03-3], terbacil [5902-51-2], and trifluralin [1582-09-8] were evaluated. In a sep. expt., repeated postemergent applications of glyphosate [**1071-83-6**], were tested. Hexazinone at 0.56 and 1.12 kg/ha provided early season weed control of 65% and 90%, resp. without affecting seedling growth or condition. Sulfometuron-Me, with and without hexazinone, provided mid-season control of 76% to 99%, but all treatments caused significant seedling injury. Glyphosate caused unacceptable seedling injury with the rate required to control weeds (1.658 gk/ha).
IT **1071-83-6 74222-97-2**, Sulfometuron methyl
106805-65-6
RL: BIOL (Biological study)
(efficacy and phytotoxicity of, in Pinus eldarica plantations)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

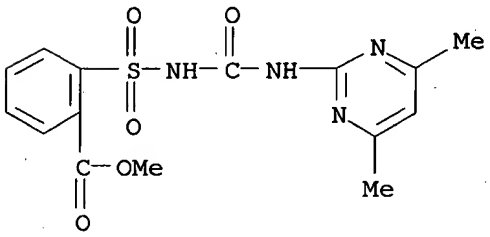
RN 74222-97-2 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 106805-65-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, methyl ester, mixt. with 3-cyclohexyl-6-(dimethylamino)-1-methyl-1,3,5-triazine-2,4(1H,3H)-dione (9CI) (CA INDEX NAME)

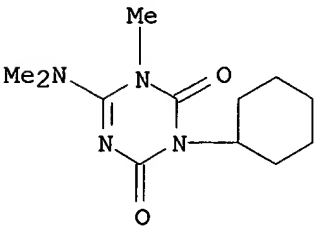
CM 1

CRN 74222-97-2
CMF C15 H16 N4 O5 S



CM 2

CRN 51235-04-2
CMF C12 H20 N4 O2



L39 ANSWER 122 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:80406 HCAPLUS
DOCUMENT NUMBER: 106:80406
TITLE: Herbicidal compositions comprising microbial herbicides and chemical herbicides or plant growth regulators
INVENTOR(S): Caulder, Jerry D.; Gotleib, Alan R.; Stowell, Larry; Watson, Alan K.
PATENT ASSIGNEE(S): University of Vermont, USA; Royal Institution for the Advancement of Learning; Mycogen Corp.
SOURCE: Eur. Pat. Appl., 39 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

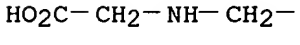
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 207653	A1	19870107	EP 1986-304384	19860609	<--
R: BE, CH, DE, FR, GB, IT, LI, NL, SE					
CA 1286121	A1	19910716	CA 1986-510087	19860527	<--
JP 62000407	A2	19870106	JP 1986-145976	19860620	<--
US 4775405	A	19881004	US 1987-784	19870106	<--
US 4776873	A	19881011	US 1987-9001	19870127	<--
US 4808207	A	19890228	US 1987-113703	19871028	<--
US 5221314	A	19930622	US 1989-304146	19890131	<--
CA 1292128	A2	19911119	CA 1989-609806	19890830	<--
CA 1297691	A2	19920324	CA 1989-615548	19891031	<--

PRIORITY APPLN. INFO.:
US 1985-747511 19850621
CA 1986-510087 19860527
CA 1986-5100879 19860527
US 1987-9001 19870127
US 1987-113703 19871028

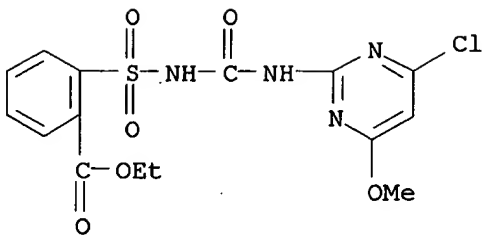
AB Synergistic compns. contain a fungal herbicide (Acremonium, Pestalotia, Septoria, etc.) and a chem. herbicide (fluazifop, glyphosate, dinoseb, etc.) or plant growth regulator (Alar, thidiazuron, mefluidide, NAA). Joint application of Colletotrichum coccodes (4100 .times. 109 propagules/acre) and Basagran (0.3 lb/acre) controlled Abutilon theophrasti by 92%, whereas the components by themselves showed 67 and 8% effectiveness, resp.

IT **1071-83-6**, Glyphosate **90982-32-4**, DPX-F6025
RL: BIOL (Biological study)
(herbicidal compn. contg. microbial herbicide and)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 90982-32-4 HCAPLUS
CN Benzoic acid, 2-[[[[(4-chloro-6-methoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-, ethyl ester (9CI) (CA INDEX NAME)



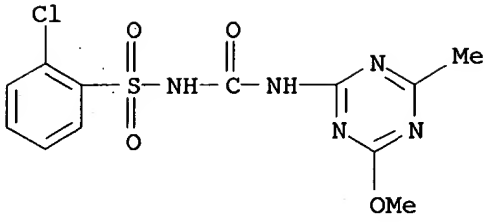
L39 ANSWER 123 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:80275 HCAPLUS
Correction of: 1986:566809
DOCUMENT NUMBER: 106:80275
Correction of: 105:166809
TITLE: Control of Jerusalem artichoke (Helianthus tuberosus) in barley (Hordeum vulgare)
AUTHOR(S): Wall, David A.; Kiehn, Ferdinand A.; Friesen, George H.
CORPORATE SOURCE: Agric. Canada Res. Stn., Morden, MB, R0G 1J0, Can.
SOURCE: Weed Science (**1986**), 34(5), 761-4
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Field expts. were conducted over 3 yr to evaluate the efficacy of herbicides for the control of volunteer Jerusalem artichoke in barley and on summer fallow. In barley, Jerusalem artichoke was controlled with a single postemergence application of clopyralid [1702-17-6] (1 kg/ha) or clopyralid-2,4-D mixt. [79636-51-4] (0.5 + 0.5 kg/ha). Dicamba-2,4-D mixt. [8068-77-7] (0.5 + 0.2 kg/ha) was also an effective combination. Split applications of 2,4-D [94-75-7] at 0.4 kg/ha each were more effective than a single treatment at 0.8 kg/ha. On summer fallow, glyphosate [**1071-83-6**] applied at 0.5-2 kg/ha, as a single or repeated treatment, provided only marginal control of Jerusalem artichoke during the season of treatment and, in 1 of 3 expts., reduced regrowth in the year following treatment.

IT **1071-83-6**, Glyphosate **64902-72-3**, Chlorsulfuron
RL: BIOL (Biological study)
(Jerusalem artichoke response to, in barley)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

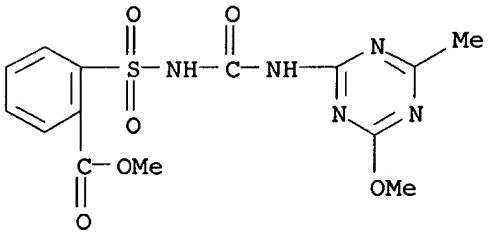


L39 ANSWER 124 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:492869 HCAPLUS
DOCUMENT NUMBER: 105:92869
TITLE: Control methods for multiflora rose (Rosa multiflora, Thunb.) with metsulfuron methyl
AUTHOR(S): Underwood, J. F.; Sperow, C. B., Jr.
CORPORATE SOURCE: Ohio State Univ., Jackson, OH, USA
SOURCE: Proceedings - North Central Weed Control Conference (**1985**), 40, 59-63
CODEN: PWCCAV; ISSN: 0099-6815
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Metsulfuron-methyl [**74223-64-6**] (0.0312 and 0.0156 lb/acre) controlled multiflora rose 100%. Similar control was obtained with dicamba [1918-00-9] (8 lb/acre), glyphosate [**1071-83-6**] (6 lb/acre) and triclopyr-2,4-D mixt. [64664-51-3] (4 + 8 lb/acre). Metsulfuron-Me was effective in both foliar and basal bark applications.

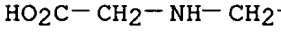
IT **74223-64-6**
RL: BIOL (Biological study)
(multiflora rose control by)

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



IT **1071-83-6**
RL: BIOL (Biological study)
(multiflora rose control by, metsulfuron-Me in relation to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



L39 ANSWER 125 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:181666 HCAPLUS
DOCUMENT NUMBER: 104:181666
TITLE: Reducing velvetleaf (Abutilon theophrasti) and giant foxtail (Setaria faberi) seed production with simulated-roller herbicide applications
AUTHOR(S): Biniak, Barbara M.; Aldrich, Richard J.
CORPORATE SOURCE: Dep. Agron., Univ. Missouri, Columbia, MO, 65211, USA
SOURCE: Weed Science (**1986**), 34(2), 256-9
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

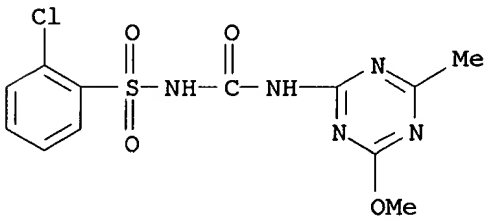
AB The potential of preventing seed prodn. and reducing seed viability of weeds that commonly grow taller than soybeans (Glycine max) was evaluated. Chlorflurenol [2464-37-1], chlorsulfuron [**64902-72-3**], and glyphosate [**1071-83-6**] were evaluated against sparse stands of velvetleaf (A. theophrasti) and giant foxtail (S. faberi) growing in soybeans. Simulated roller applications of all 3 herbicides significantly reduced seed prodn. and germination of both weeds, although glyphosate was more effective than were the other two. Applications during early flowering of velvetleaf and early heading of giant foxtail reduced seed prodn. more than later applications when some seeds were present. With the early application of glyphosate, 99% prevention of velvet-leaf and 96% prevention of giant foxtail seed prodn. were attained. With the early glyphosate application, germination of seeds produced was reduced by 50% in velvetleaf and by 95% in giant foxtail. Soybean yields were not reduced by either glyphosate or chlorflurenol but were drastically reduced by chlorsulfuron.

IT **1071-83-6 64902-72-3**
RL: BIOL (Biological study)
(giant foxtail and velvetleaf seed prodn. redn. by roller application of, to soybeans)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 126 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:124913 HCAPLUS

DOCUMENT NUMBER: 104:124913
TITLE: The tolerance of blackcurrants to shoot and root applications of 30 herbicides
AUTHOR(S): Clay, D. V.
CORPORATE SOURCE: Weed Res. Div., Long Ashton Res. Stn., Bristol, BS18 9AF, UK
SOURCE: Proceedings - British Crop Protection Conference--Weeds (**1985**), (3), 1065-72
CODEN: PBCWDF; ISSN: 0144-1604
DOCUMENT TYPE: Journal
LANGUAGE: English

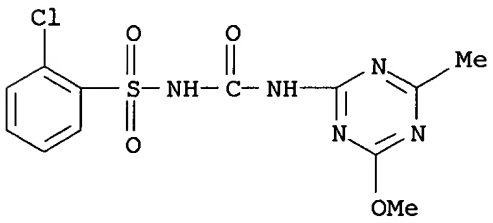
AB The activity of 30 herbicides was tested on container-grown blackcurrants using sep. applications to the shoots or to the roots of plants growing in sand culture. Pendimethalin [40487-42-1], alloxydim sodium [55635-13-7], fluazifop-butyl [69806-50-4] and sethoxydim [74051-80-2] had no detectable effect in any test. Oxadiazon [19666-30-9] had no adverse effect except as an overall spray in spring. Oxyfluorfen [42874-03-3] sprays in spring were more damaging. Ethofumesate [26225-79-6] sprays resulted in long-term leaf distortion. Some triazine herbicides with postemergence activity were safe as directed sprays. Apart from a trietazine-simazine mixt. [37287-53-9] they were more toxic than simazine [122-34-9] when applied to the roots, but safer than diuron [330-54-1], a recommended herbicide. Methazole [20354-26-1] was also much safer than diuron when applied to shoots or roots. Hexazinone [51235-04-2] was very toxic as a shoot or root application as was root treatment with chlorsulfuron [**64902-72-3**]. Benazolin [3813-05-6] and triclopyr [55335-06-3] were more damaging than clopyraolid [1702-17-6]. Overall sprays of phenmedipham [13684-63-4], pyridate [55512-33-9] and AC 222293 [81405-85-8] caused initial damage, which was subsequently outgrown. Bentazone [25057-89-0] caused little damage except as an overall spray in summer. Glufosinate [51276-47-2] was less damaging than paraquat [4685-14-7].

IT **1071-83-6 64902-72-3**
RL: BIOL (Biological study)
(blackcurrant tolerance to)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

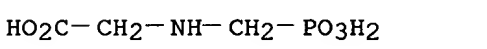


L39 ANSWER 127 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:47078 HCAPLUS
DOCUMENT NUMBER: 104:47078
TITLE: Effect of herbicides on the photosynthesis reaction in plants and algae
AUTHOR(S): Kafarov, R. S.; Bakumenko, L. A.; Matorin, D. N.
CORPORATE SOURCE: MGU, Moscow, USSR
SOURCE: Agrokhimiya (**1985**), (11), 99-104
CODEN: AGKYAU; ISSN: 0002-1881
DOCUMENT TYPE: Journal
LANGUAGE: Russian

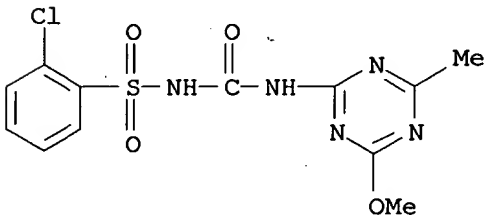
AB A comparative study was made of the effects of glyphosate (I) [**1071-83-6**], chlorsulfuron (II) [**64902-72-3**], and dimethametryn (III) [22936-75-0] on fluorescence of isolated chloroplasts and whole leaves of pea, and whole cells of Chlorella. At 10-4-10-5 M, I diminished the amplitude of the slow phase of the fluorescence induction curve of isolated chloroplasts, acting much like a protonophore in stimulating the transport of electrons. II (10-4-10-5 M) had no influence on the slow fluorescence of chloroplasts. III, even at very low concns. (10-8-10-9 M), substantially depressed the amplitude of the slow fluorescence response in chloroplast suspensions. All 3 herbicides applied (10-4-10-5 M) to Chlorella suspensions had effects that were similar to their influence on isolated pea chloroplasts. Each herbicide (including II, which was without effect on Chlorella fluorescence) depressed cell division. Following vacuum infiltration of the herbicides into intact pea leaves, I depressed the fluorescence induction max., II had no effect, whereas III strongly inhibited slow fluorescence. At the concns. used (10-4-10-5 M), II caused the most marked redn. of seedling growth.

IT **1071-83-6 64902-72-3**
RL: BIOL (Biological study)
(chlorophyll fluorescence response to, in Chlorella and pea)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



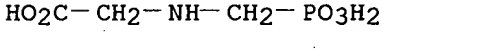
L39 ANSWER 128 OF 133 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:2097 HCAPLUS
DOCUMENT NUMBER: 104:2097
TITLE: The effect of added surfactant on the performance of scrubweed herbicides
AUTHOR(S): Balneaves, John M.
CORPORATE SOURCE: New Zealand Forest Res. Inst., Christchurch, N. Z.
SOURCE: Proceedings of the New Zealand Weed and Pest Control Conference (**1985**), 38th, 98-101
CODEN: PZWPAL; ISSN: 0370-2804
DOCUMENT TYPE: Journal
LANGUAGE: English

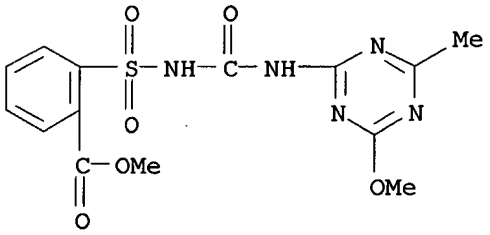
AB The addn. of polyalkylene oxide-modified di-Me polysiloxane (Pulse to the tank mix improved the performance of glyphosate, metsulfuron-methyl, and Tordon 520 Brushkiller (I) in controlling mature gorse (Ulex europaeus) and broom (Cytisus scoparius). It sometimes slightly improved the performance of hexazinone. There were indications that Pulse improved the performance of I when applied in the autumn but had a neg. effect during early summer applications. When Pulse was added to glyphosate, better control was achieved in the autumn than in the early or mid-summer application times.

IT **1071-83-6 74223-64-6**
RL: BIOL (Biological study)
(scrubweed control by, surfactant addn. improvement of)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 129 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:573936 HCAPLUS
DOCUMENT NUMBER: 103:173936
TITLE: 'Non-hormone' herbicides for gorse control
AUTHOR(S): Popay, A. I.; Rolston, M. P.; Edmonds, D. K.
CORPORATE SOURCE: Agric. Res. Div., MAF, Palmerston North, N. Z.
SOURCE: Proceedings of the New Zealand Weed and Pest Control Conference (**1985**), 38th, 94-7
CODEN: PZWPAL; ISSN: 0370-2804
DOCUMENT TYPE: Journal
LANGUAGE: English

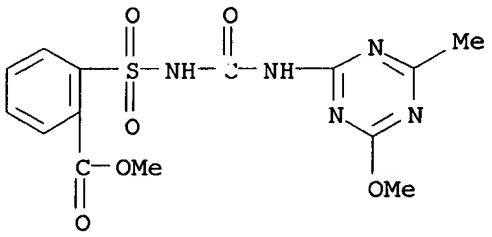
AB Herbicides which may be useful for gorse control on pastures in hormone-sensitive vegetable-growing areas were tested at different rates and dates of application, using different methods of application. Metsulfuron-methyl [**74223-64-6**] gave good control, and glyphosate [**1071-83-6**] with surfactant (Triton X-45 or Silwet L77) was also potentially effective. Amitrole T [8004-05-5] was also effective in most cases. Tebuthiuron [34014-18-1] gave variable results but may be worth further investigation. NH4 sulfamate and glufosinate-ammonium were relatively ineffective.

IT **1071-83-6 74223-64-6**
RL: BIOL (Biological study)
(gorse control by)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 74223-64-6 HCAPLUS
CN Benzoic acid, 2-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 130 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:537166 HCAPLUS
DOCUMENT NUMBER: 103:137166
TITLE: The effects of chlorsulfuron, glyphosate, metribuzin and TCA on soil nitrification capacity and dehydrogenase activity
AUTHOR(S): Heinonen-Tanski, Helvi; Montonen, L.; Ervio, L. R.; Junnila, S.; Pessala, B.
CORPORATE SOURCE: Dep. Microbiol., Univ. Helsinki, Helsinki, SF 00710, Finland
SOURCE: Colloques - Institut National de la Recherche Agronomique (**1985**), 31(Comportement Eff. Second. Pestic. Sol), 183-9
CODEN: COLIEZ; ISSN: 0293-1915
DOCUMENT TYPE: Journal
LANGUAGE: English

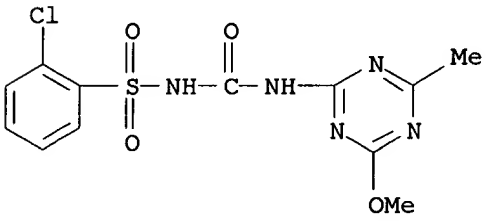
AB Chlorsulfuron [**64902-72-3**] 0.004 and 0.012 and glyphosate [**1071-83-6**] 1.4 and 4.3 kg/ha affected slightly soil dehydrogenase [9035-82-9] and nitrification, whereas metribuzin [21087-64-9] 0.7 and 1.4 and TCA [76-03-9] 26 and 76 kg/ha reduced dehydrogenase activity and nitrification, esp. in clay soils.

IT **1071-83-6 64902-72-3**

RL: BIOL (Biological study)
(dehydrogenase and nitrification in soil response to)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)

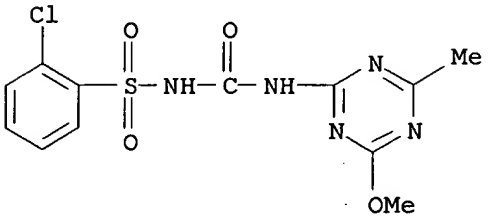


L39 ANSWER 131 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:500298 HCAPLUS
DOCUMENT NUMBER: 103:100298
TITLE: Influence of sublethal concentrations of herbicides and growth regulators on mouseearcress (Arabidopsis thaliana) progeny
AUTHOR(S): Henzell, Ron; Phillips, John; Diggle, Peter
CORPORATE SOURCE: Ruakura Soil Plant Res. Stn., Minist. Agric. Fish., Hamilton, N. Z.
SOURCE: Weed Science (**1985**), 33(4), 430-4
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence of sublethal levels of a no. of herbicides and plant growth regulators on the germinability of the seeds and the growth and development of seedlings of mouseearcress (A. thaliana) was detd. Only 7 of the 22 chem. tested had a persistent effect on progeny. Amitrole [61-82-5] was one of the most effective compds. It caused a characteristic bleaching only in shoot tips and pods in parent plants and appeared to act directly on the progeny by accumulation in the seed. Two auxin transport inhibitors, TIBA [88-82-4] and CPPI (5-O-carboxyphenyl-3-phenylisoxazole) [60510-53-4], and 4 of the 6 photosynthetic electron transport inhibitors also affected progeny. They appeared to act indirectly by interfering with seed development.
IT **1071-83-6 64902-72-3**
RL: BIOL (Biological study)
(Arabidopsis thaliana progeny response to sublethal concns. of)
RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 132 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:524912 HCAPLUS
DOCUMENT NUMBER: 101:124912
TITLE: Herbicidal composition
INVENTOR(S): Hausmann, Heinz; Schmidt, Robert R.; Voege, Herbert
PATENT ASSIGNEE(S): Bayer A.-G. , Fed. Rep. Ger.
SOURCE: Ger. Offen., 30 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
DE 3247050	A1	19840620	DE 1982-3247050	19821220	<--
US 4626274	A	19861202	US 1983-557685	19831202	<--
EP 113857	A1	19840725	EP 1983-112327	19831208	<--
EP 113857	B1	19860730			
R: AT, BE, CH, DE, FR, GB, IT, LI, NL					
AT 21008	E	19860815	AT 1983-112327	19831208	<--
AU 8322379	A1	19840628	AU 1983-22379	19831214	<--
DK 8305848	A	19840621	DK 1983-5848	19831219	<--
BR 8306958	A	19840724	BR 1983-6958	19831219	<--
ZA 8309373	A	19840829	ZA 1983-9373	19831219	<--
HU 32704	O	19840928	HU 1983-4334	19831219	<--
HU 196978	B	19890228			
JP 59118701	A2	19840709	JP 1983-239065	19831220	<--

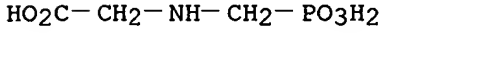
PRIORITY APPLN. INFO.: DE 1982-3247050 19821220
EP 1983-112327 19831208

AB Spreading agents, such as silicone oils, or fatty acid alcs. or esters, enhance the effectiveness of many known herbicides. The spreading agents should be present in higher-than-usual amts. Thus, applied pre-emergence, metamitron [41394-05-2] (3 kg/ha) controlled Polygonum in sugar beet by 65%. Addn. of iso-Pr myristate [110-27-0] (5 kg/ha) to metamitron led to 100% control.

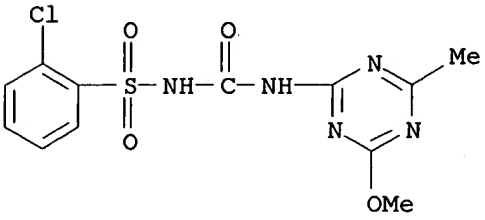
IT **1071-83-6 64902-72-3**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except

adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal activity of, enhancement of, by silicone oils and fatty acids and esters)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)



L39 ANSWER 133 OF 133 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:434411 HCAPLUS
DOCUMENT NUMBER: 101:34411
TITLE: Leaf wash techniques for estimation of foliar absorption of herbicides
AUTHOR(S): Devine, Malcolm D.; Bestman, Hank D.; Hall, Chris; Vanden Born, William H.
CORPORATE SOURCE: Dep. Plant Sci., Univ. Alberta, Edmonton, AB, T6G 2P5, Can.
SOURCE: Weed Science (**1984**), 32(3), 418-25
CODEN: WEESA6; ISSN: 0043-1745
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three wash techniques, each with 1, 10, or 95% (vol./vol.) EtOH:H2O were used to measure foliar absorption of glyphosate [**1071-83-6**], 3,6-dichloropicolinic acid [1702-17-6], and chlorsulfuron [**64902-72-3**] (all 14C-labeled) in Tartary buckwheat (Fagopyrum tataricum), Canada thistle (Cirsium arvense), and barley (Hordeum vulgare). For the herbicides and species tested, the most suitable common procedure for detg. absorption consisted of a double or triple rinse with, or immersion, in 10% EtOH. Wiping the treated leaves with cotton balls moistened with the solvent was much less effective. Efficiency of herbicide removal by a given solvent was not related consistently to soly. of the herbicide in the solvent.

IT **1071-83-6 64902-72-3**
RL: BIOL (Biological study)
(foliar absorption of, leaf wash technique for estn. of)

RN 1071-83-6 HCAPLUS
CN Glycine, N-(phosphonomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)

$HO_2C-CH_2-NH-CH_2-PO_3H_2$

RN 64902-72-3 HCAPLUS
CN Benzenesulfonamide, 2-chloro-N-[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]- (9CI) (CA INDEX NAME)